

# **Bridge of Steel, US Merchant Shipping in World War II**

**A Monograph  
by  
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United States Army**



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## Abstract

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The only feasible method of transporting divisions of personnel and equipment is, and used to be, by sea. What planning, management and coordination of shipping requirements existed within the US Army and civilian agencies prior to and during World War II? The US Navy had limited transport shipping and the US Army had even fewer. In order to support the millions of personnel and millions of tons of equipment used in the war effort, the maritime capabilities of the civilian sector needed to fill the void.

This existed not as a new role for the merchant fleet, nor a new challenge for government of the United States. Only the scope would be different when one compares WW I to WW II—a two-ocean as opposed to one-ocean war in the latter case. There lacks a method to measure the levels and effectiveness of the coordination and planning beyond the end result.

The resulting success of the US in its military endeavors during WWII can be somewhat misleading about the effectiveness of the coordination and planning between the Army and civilian agencies. No nation has produced a tonnage of shipping in a four-year period that exceeds that of US during WWII. The British focused on the production of warships, particularly escorts to wage the Battle of the Atlantic. The Union of Soviet Socialist Republics lacked production capability as they conducted a land war against Germany. The Japanese did not have access to as many resources to produce the numbers the US did, even though the Japanese Empire expanded considerably by aggressive use of their navy.

This monograph is a historic study of US wartime merchant shipping during WWII. The purpose of this study is to understand the structure, conditions, and material considerations necessary to conduct trans-continental major combat operations. This monograph maps the sequence of events necessary to make maritime logistical support for Atlantic and Pacific operations possible. The first main section discusses the state of US maritime capabilities prior to the Japanese attacks on Pearl Harbor, 7 December 1941. This includes the planning, conceptualization, and legal authorizations established prior to the formal declaration of war that served as the foundation for the buildup of merchant shipping. The second section describes changes to the civilian and military planning and control systems instituted during the first 18 months of declared war. This section highlights the difficulties as the previously developed and new logistical plans met the harsh realities of actual execution. The final section is a case study of the logistical plan supporting Operation OVERLORD. This case study shows how the US overcame its initial logistical challenges enabling the largest amphibious operation in history. Particularly, it studies the transition from conceptual to detailed planning and its execution. The conclusion of this monograph posits avenues for further historic research.

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## Chapter One – Introduction

The United States of America had an incredible ability to create and destroy material during World War II (WWII). While fighting in Europe, Asia, the Atlantic Ocean, the Pacific Ocean, and Africa, American industry accomplished production levels unsurpassed to this day. The ability to project personnel and equipment on a global scale during WWII displayed the greatest example of America's (and perhaps for any other state's) economic and industrial might to date. The industrial capabilities of America and the ability to project the United States Army, Navy and Marines proved to be unmatched in nearly every measurable way. The popular memory of WWII produces images of ground fighting in France en route to Germany, island hopping in the Pacific, the atomic bombs on Nagasaki and Hiroshima, and of the D-Day invasion at Normandy. The massive resources required to undertake these operations did not exist in America's storehouses or stored on its military bases in the United States. Resources became available during the war because of wartime production. America's industrial production truly got underway starting just a few years prior to the surprise attack on Pearl Harbor by the Japanese Navy. Although unprepared for a global war in 1941, America still had a solid foundation to accelerate mass production of war material.

The popular histories imply that the United States of America appeared to be completely surprised.<sup>1</sup> Executive and Legislative branches seemed to be aware of the potential of being engaged in yet another world war. Congress passed laws that created agencies to assist in preparing the economy and its infrastructure to wage war. President Franklin D. Roosevelt assisted the Allied powers with equipment and personnel prior to the attack on Pearl Harbor. Without a catalyst event, most of the US public would only countenance only limited material support. The US, still struggling to emerge from the Great Depression and attempting to avoid the affairs of Europe, limited the potential for another world war by

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<sup>1</sup> Popular sites such as Wikipedia at [http://en.wikipedia.org/wiki/Attack\\_on\\_Pearl\\_Harbor](http://en.wikipedia.org/wiki/Attack_on_Pearl_Harbor), accessed 27 July10, are frequently read, even though the data may be erroneous.

continually signing treaties such as the London Naval Treaty in 1936.<sup>2</sup> Like Britain, the United States entered such treaties to both limit the construction of warships by the major European powers, as well as Japan, while saving on naval expenditures at the same time. This policy ultimately failed.

However, President Roosevelt did what he could in the 1930s to prepare the US for eventual entry into WWII. Congress appeared reluctant but did participate legislatively in the establishment of various commissions, agencies and legal support to the President to allow at least some measure of planning. The President worked with the British to transfer old destroyers to assist them in the Battle of the North Atlantic. As hard currency reserves for Britain became scarce, the US implemented the Lend-Lease program to assist Britain with its supply problems.<sup>3</sup> The passing of the Lend-Lease program opened the door for US industry to increase production. The addition of the Soviet Union in June of 1941 as a Lend-Lease Program client added additional requirements on American production.<sup>4</sup> However, once war declaration occurred, the industrial complex of the US went to a total wartime footing. The Department of War refined the training and planning for the assault on Europe then Asia. A number of military organizations existed to assist in engineering the downfall of the Axis powers<sup>5</sup> with the posed power projection challenges. The best defense took the war to the enemy, but to bring substantial US strength to bear meant facing massive logistical challenges.<sup>6</sup>

The primary challenge for the US laid in transportation of forces and resources. American forces fought on the high seas of the Atlantic and Pacific, on the islands in the Pacific, and in Europe. The only

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<sup>2</sup> Allen R. Millett and Williamson Murray, *Military Innovation in the Interwar Period* (Cambridge University Press, New York, 1996), p51. The second London Naval Treaty extended and expanded many of the articles of the original Washington (1922) and London (1930) naval treaties, see John T. Kuehn, *Agents of Innovation* (Annapolis, MD: Naval Institute Press, 2008), chapters 3-4, *passim*.

<sup>3</sup> Alan P. Dobson, *US Wartime Aid to Britain 1940-1946* (St. Martin's Press, New York, 1986), 10.

<sup>4</sup> Waldo Heinrichs, *Threshold of War, Franklin D. Roosevelt and the American Entry into World War II* (Oxford University Press, New York, 1988), p104-5.

<sup>5</sup> The Axis Powers were Germany, Japan and Italy.

<sup>6</sup> Richard Overy, *Why the Allies Won* (W.W. Norton and Company, New York, 1997). Overy proposes production and management contributed significantly throughout his book as a major factor to the Allies victory.

way for America to get into the fight involved crossing these vast oceans. That required warships and, just as importantly, merchant shipping.

This expected requirement came from the experience during World War I (WWI). In that war, the industrial complex swung into action in response to the war requirements. Shipping support existed for the British, French and US soldiers as they deployed to the European Theater. To manage the shipping requirements that supply and deployments generated, the US government created the Shipping Bureau. The responsibilities of the Shipping Bureau (SB) managed all of the merchant shipping under US flags to get the items to the ‘European War’. After WWI, the SB dissolved and the US economy continued in the way it had prior to the conflict.<sup>7</sup>

During the interwar period, the US government recognized the signs in Europe and realized there was a need to organize the shipping effort prior to WWII. In 1936, the US Congress passed the Merchant Marine Act of 1936 and created the Maritime Commission (MC). The Commission had the following responsibilities:

1. make a survey of the American merchant marine, as it now exists, to determine what additions and replacements are required to carry forward the national policy
2. study, perfect, and adopt a long-range program for replacements and additions to the American merchant marine so that as soon as practicable:
  - a. First, the creation of an adequate and well-balanced merchant fleet, including vessels of all types, to provide shipping service on all routes essential for maintaining flow of commerce of the United States, the vessels in such fleet to be so designed as to be readily and quickly convertible into transport and supply vessels in a time of national emergency. In planning the development of such a fleet the Commission is directed to cooperate closely with the Navy Department as to national-defense needs and the possible speedy adaptation of the merchant fleet to national-defense requirements.
  - b. Second, the ownership and the operation of such a merchant fleet by citizens of the United States insofar as may be practicable.
  - c. Third, the planning of vessels designed to afford the best and most complete protection for passengers and crew against fire and all marine perils.<sup>8</sup>

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<sup>7</sup> Merchant Marine Act of 1936, accessed at <http://www.usmm.org/mmact1936.html> on 20 July 2010

<sup>8</sup> Ibid.

This directed the Commission to rejuvenate the current fleet of merchant shipping over the course of ten years with 500 modern, fast ships usable by the Navy Axillaries fleet if required. The MC would create and monitor a subsidies system for the purchase and of building new ships in the US instead of abroad. It would manage the fleet of merchant shipping under the purview of the MC in cooperation with the Navy in the service of national defense.<sup>9</sup>

The Departments of War and Navy realized the need to plan the potential for another war to end all wars. They planned as early as 1920 and throughout the interwar period for the continuation of WWI. Strategic war plans became color coded for various locations throughout the world. The Pacific Ocean area of operations and its primary advisory in Japan existed as War Plan Orange.<sup>10</sup> It laid out what the military planners believed to be the outline required to win a war in the Pacific. It discussed the merchant shipping requirements to transport all the personnel and equipment planned in Annex F to Plan Orange.<sup>11</sup> The Rainbow War Plans of 1939 established a plan to conduct two theaters of war simultaneously in Europe and Asia.<sup>12</sup>

As apparent above, the military and civilian sectors required shipping. Prior to the US entrance into WWII, the British lacked large quantities of goods and supplies once Nazi Germany had closed off most continental European markets and resources them. The US assisted with programs such as Lend-Lease including a British order for sixty cargo vessels built in US shipyards.<sup>13</sup> In order to understand the high level of visibility this issue received and who had the ability to manipulate shipping, the organizational chart below shows the major elements involved in wartime use of maritime shipping:

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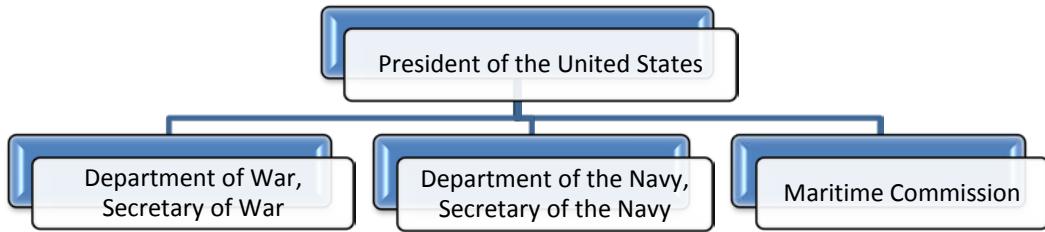
<sup>9</sup> Ibid.

<sup>10</sup> Edward S. Miller, *War Plan Orange* (Naval Institute Press, Maryland, 1991), 2.

<sup>11</sup> Steven T. Ross, *Plans for Global War – Rainbow5 and the Victory Program 1941*, (Garland Publishing, Inc., New York, 1992), 99.

<sup>12</sup> Steven T. Ross, *Plans for War Against the British Empire and Japan, The Red, Orange and Red-Orange Plan 1923-1938* (Garland Publishing, Inc., New York, 1992), 3.

<sup>13</sup> Fredric C. Lane, Coll, Blanche D., Fisher, Gerald J., Tyler, David B. *Ships For Victory: A History of Shipbuilding Under the US Maritime Commission in World War II* (Johns Hopkins Press, Baltimore 1951), 54.



**Figure 1: Command relationships of Maritime Shipping Prior to WWII**

The MC had direct access to the President of the United States and was not under the direct authority by agencies as large and influential as the Department of War and Navy. During the interwar period, this relationship did not cause significant problems or “turf wars.”<sup>14</sup> The MC initially focused on the updating of the merchant fleet to more modern, faster ships and the planning of construction of sixty merchant ships for the British in US shipyards. While the Army worked with the Navy on the colored war plans, it identified its own needs for merchant shipping. The Navy and Army both had a number of vessels to call upon but these were inadequate to support the planned requirements to wage a large war overseas.

## Purpose

The purpose behind this thesis is to answer the question: What planning, management and coordination of shipping requirements existed within the US Army and civilian agencies prior to and during World War II? The only feasible method of transporting divisions of personnel and equipment was, and still is by sea. The US Navy had limited transport shipping and the US Army had even less. In order to support the millions of personnel and millions of tons of equipment to support the war effort, the maritime capabilities of the civilian sector needed to fill the void. This existed not as a new role for the

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<sup>14</sup> Paul Y. Hammond, *Organizing for Defense, The American Military Establishment in the twentieth Century* (Princeton University Press, New Jersey, 1961), 116.

merchant fleet, nor a new challenge for government of the United States. Only the scope would be different when one compares WW I to WW II—a two-ocean as opposed to one-ocean war in the latter case.

## **Method**

The evidence to support the levels and effectiveness of the coordination and planning will be primarily subjective. There lacks a method to measure beyond judging the actions by their results. The resulting success of the US in its military endeavors during WWII can be somewhat misleading about the effectiveness of the coordination and planning between the Army and civilian agencies.

On the issue of merchant shipping, no nation has produced a tonnage of shipping in a four-year period that exceeds that of US during WWII. The British focused on the production of warships, particularly escorts to wage the Battle of the Atlantic. The Union of Soviet Socialist Republics (USSR or Soviet Union) lacked an infrastructure for mass shipping production capability since they conducted a land war against Germany. The Japanese did not have access to as many resources to produce the numbers the US did, even though the Japanese Empire expanded considerably by aggressive use of their navy.

Measuring effectiveness of the merchant shipping effort in WWII is also subjective. The first means involves assessing the accuracy of the estimates produced by planning to assist civilian management in allocating shipping resources. Did operations occur in spite of, or in coordination with, the systems and processes in place to manage the production and assignment of merchant shipping? The most important measure is the effectiveness of merchant shipping management and coordination to support the war effort – did it work?

Overall effect of the available resources provided two perspectives. Military and civilian memories and monographs provided the first, contemporary (interwar-WWII) prospective. The second perspective consisted of secondary works from the military, economic and civilian key personnel.

Between the near perspective and the reflective look back at WWII, assessing of how well the system functioned is possible.

## **Literature Review**

A small body of literature addresses the relationships between the civilian agencies, in particular the MC and the US Army. The primary location available to support this area of research resides at the National Archives (NARA) located at College Park, MD.<sup>15</sup> Due to this constraint this study was unable to incorporate this resource but it is recommended that future research build on this basic framework by doing so.

The secondary sources that address WWII are extensive. The Army “green book” series is a historical look from the US Army perspective. Frederic Lane provided a historically researched viewpoint of the MC. Other works cataloging the economic endeavors of the US to support Britain, the Soviet Union and further the US war effort are numerous.

While there are numerous sources that mention the accomplishments of the United States in its shipbuilding efforts during WWII, few mention the government agencies responsible for that success. Most websites on the battle of the North Atlantic show statistics reflecting tonnage lost to the German submarines. The tonnage produced for shipping by the U.S often followed these figures. The sites show how the Germans’ ability to sink ships outpaced by the ability of the US to build shipping.<sup>16</sup> A few sites mention the MC or the War Shipping Administration (WSA).<sup>17</sup>

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<sup>15</sup> The United States National Archival Records of the Maritime Commission is Record Group (RG) 178. Records of the War Shipping Administration is RG 248. Both record groups encompass over 13 cubic feet of material each.

<sup>16</sup> For representative websites see [http://www.worldwar2database.com/html/atlantic43\\_45.html](http://www.worldwar2database.com/html/atlantic43_45.html) accessed 16 June 2009), and also <http://histclo.com/essay/war/ww2/cou/us/aod/aod-ls.html> (accessed 12 June 2009) or [http://www.hq.wwiiionline.com/profiles/supply\\_ship.shtml](http://www.hq.wwiiionline.com/profiles/supply_ship.shtml) (accessed 10 September 2010).

<sup>17</sup> For representative websites see [www.globalsecurity.org/military/systems/ship/sealift-ww2.htm](http://www.globalsecurity.org/military/systems/ship/sealift-ww2.htm) (accessed 10 August 2010), and also <http://www.usmaritimecommission.de/> (accessed 12 June 2009).

The Director of the War Production Board, Mr. Donald Nelson, who wrote *Arsenal of Democracy: The Story of American War Production* proves to be a primary source for some of the activities completed by the WSA and MC. He used the MC as the example of the most successful program for industrialization of the US industry and dedicated an entire chapter on their activities. The Army Navy Munitions Board minutes on microfilm are available at the CARL at Ft Leavenworth, KS and demonstrate the joint perspective on resource allocation of resources.

Secondary sources are scarce as well. The only work dedicated to the MC in WWII is *Ships for Victory: A History of Shipbuilding Under the US Maritime Commission in World War II* by Fredric C. Lane. The MC commissioned Lane to document the MC activities during WWII. When the MC ran out of funds, he decided to finish the work through grants and time given to him by John Hopkins University. Lane's work covers pre-war to the completion of WWII and discusses how the MC affected the war effort. As the production completed immediately following the war, Lane accessed the records currently contained in the National Archives as well as interviewing many key personnel fresh from the experiences in the recent war.

The Army perspective on the coordination is located primarily in the official military histories of the Office of the Chief of Military History, Department of the Army (ie. the "green books"). A number of the volumes mention the coordination and planning done by the Army just prior to and during the war.

*Global Logistics and Strategy and two volumes on the Transportation Corps* proved helpful in the overall Army perspective. *The Persian Corridor* is a great example of the relationship between the Army and the WSA and MC. Transportation specialists wrote key monographs on the research of the coordination and management of US Army shipping management. The digital library of CARL provided copies of these valuable studies.

## **Composition**

This monograph consists of five chapters. This introduction identified the thesis, the method, the background of the topic and a brief literature review. Chapter two focuses on the plans, coordination and

general setting of the situation as regards to merchant shipping for the Department of the Army and the MC prior to the US entry of WWII. Chapter three covers the beginning of WWII from 1941 through 1943 and how the plans unfolded, in particular how the Department of War? and MC interacted. Chapter four explores the preparations, construction, planning and coordination for merchant shipping for OPERATION OVERLORD. Chapter five is the conclusion suggested by the evidence and the overall evaluation of the thesis question. Implications for further research and on current planning and operations within the current Department of the Army and larger Department of Defense and civilian agencies appear here as well.

## Chapter Two - Prior to the United States Entering WWII

The United States Government involved three major elements with merchant shipping. The MC, a civilian agency, had congressional authority to manage all matters of shipping for the United States. The United States Navy played a large role in the coordination of shipping requirements. The Department of War and the United States Army owned shipping requiring augmentation due to the anticipated overseas theaters of war.<sup>18</sup>

During the interwar period of 1920 through 1939, the major countries desired limiting the capital ships and carriers of the navies of the world.<sup>19</sup> While this caused some tension with Japan and Germany, it attempted to limit the potential for large-scale war. It limited the construction of warships but did not address merchant shipping. Most nations' economy regulated merchant vessel construction.

Indicators of what to come existed in the early and mid-1930s. Germany seized the Rhineland and reinforced the area with fortifications. German's four-year plan to rejuvenate its economy violated the Versailles Treaty. German forces operating in the Spanish Civil War showed great ability and exceeded treaty authorized military force size. The Japanese invaded Manchuria, China. The Japanese continued the land campaign even though the world community disapproved.<sup>20</sup>

In addition to the looming crisis of another world war, America experienced its largest economic depression in history. A number of programs implemented by President Roosevelt's administration eased the difficulties. The New Deal, the National Industrial Recovery Act<sup>21</sup> and similar projects employed Americans throughout the United States. As 1940 approached, the United States prepared for future

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<sup>18</sup> Harold Larson, *The Army's Cargo Fleet in World War II, Monograph #18*, Office of the Chief of Transportation Army Service Forces (Bookhaven Press, La Crosse, Wisconsin, 2004), 3.

<sup>19</sup> Conference on the Limitation of Armament, Washington, November 12 1921-February 6, 1922. Retrieved 10 October, 2010 from [http://www.ibiblio.org/pha/pre-war/1922/nav\\_lim.html](http://www.ibiblio.org/pha/pre-war/1922/nav_lim.html).

<sup>20</sup> Heinrichs, 8.

<sup>21</sup> National Industrial Recovery Act, passed 16 June 1933, <http://www.historicaldocuments/NationalIndustrialRecoveryAct.htm>, 25 April 2006.

defensive efforts by passing such bills as the Selective Service Act in September 1940, the trade with Britain's lease of naval bases for fifty aged US destroyers.<sup>22</sup>

## US Preparations

The United States military planners accounted for the mobilization of the American economy because the National Defense Act of 1920 provided authority to do so.<sup>23</sup> The Protective Mobilization Plan and the Industrial Mobilization Plan provided the backing for United States military planners to direct the national economy in preparation and conduct of the national defense.<sup>24</sup> The United States Congress also passed the "Two Ocean Navy" Act of 1940 fleet expansion program allowing construction of warships beyond treaty constraints. The act attempted to alleviate some of the shortage of transports as well.<sup>25</sup>

The US Army, US Navy and Roosevelt Administration started in the late 1930s and 1940/1941 to conduct a serious dialogue with the British on the joint prosecution of a Second World War.<sup>26</sup> The President surreptitiously assisted the British in the Battle of the Atlantic. For example, in April 1941, President Roosevelt opened the Red Sea to American shipping. Nearly fifty vessels starting taking most of the trade route requirements in that area so British flagged vessels could traverse routes that were more hazardous. Additionally, American yards repaired almost a half million tons of British shipping.<sup>27</sup>

Civilians managed merchant shipping in the 1930s. In World War I, the US government established a management system to facilitate the requirements for shipping. Civilians juggled economic needs and the needs of the nation's military. Congressional management of the merchant marine shipping

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<sup>22</sup> Heinrichs, 11.

<sup>23</sup> R. Elberton Smith, *US Army in World War II, The War Department, The Army and Economic Mobilization* (Washington D.C., Office of the Chief of Military History, Department of the Army, 1959), 39.

<sup>24</sup> Henry G. Gole, *The Road to Rainbow, Army Planning for the Global War 1934-1940* (Naval Institute Press, Maryland, 2003), 83.

<sup>25</sup> Millett, 83.

<sup>26</sup> Richard M. Leighton, and Robert W. Coakley (1955), *Global Logistics and Strategy 1940-1943* Washington D.C., Office of the Chief of Military History, Department of the Army. 52.

<sup>27</sup> Leighton, 60.

started in 1916 with the passing of the Shipping Act of 1916, also known as the Alexander Act. The US Shipping Board specifically had the responsibility for “regulating maritime carriers and trade practices, developing naval auxiliary and merchant marine, and subsidizing ship construction.”<sup>28</sup> The following responsibilities belonged to the Shipping Board:

1. form one or more corporations for the purchase, leasing, and operation of merchant vessels with a maximum capital of \$50 million,
2. to acquire vessels suitable for naval auxiliaries,
3. to regulate commerce on the Great Lakes and the high seas, including the fixing of rates,
4. to cancel or modify any agreement among carriers that were found to be unfair as between carriers and exporters, or which operated to the detriment of United States commerce, and
5. to sanction pooling agreements among shippers which were exempted from the operations of the Sherman Act.<sup>29</sup>

The American economy, military resources and shipping started catching up with the requirements to conduct war globally. The United States economic and military strength failed to maximize potential prior to the end of the Great War to end all wars. In 1920, the US Government transferred the duties and responsibilities of the Shipping Board to the Department of Commerce. The Shipping Act of 1916 lacked relevance at war’s end because the Alexander Act existed as a wartime measure to manage merchant shipping.<sup>30</sup>

## **US Command Relations of Shipping**

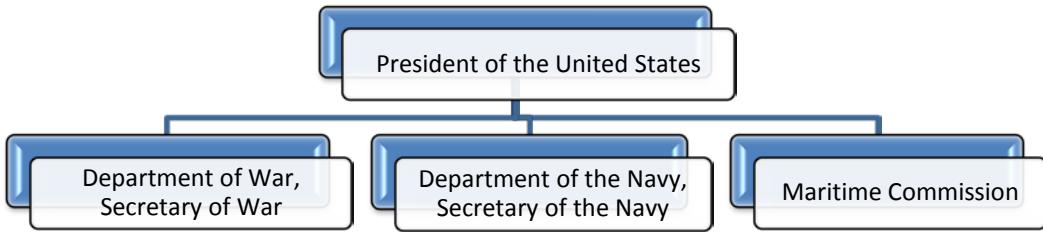
POTUS remained the direct authority of the MC, Department of War and Department of the Navy (See Figure1: Command Relationships of Maritime Shipping Prior to WWII). Regarding merchant shipping, the US Navy had its auxiliaries to support itself. The US Army had the Quartermaster General to provide planning and management. Civilians managed the MC.

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<sup>28</sup> Archives, T. N. (n.d.). The National Archives. Retrieved 31 July 2009, from Records of the Federal Maritime Commission, Record Group 358: <http://www.archives.gov/research/guide-fed-records/groups/358.html#358.1>

<sup>29</sup> Merchant Marine Act of 1916 (Alexander Act). Retrieved 14 June 2009, <http://www.usmm.org/mmact1936.html>

<sup>30</sup> Ibid.

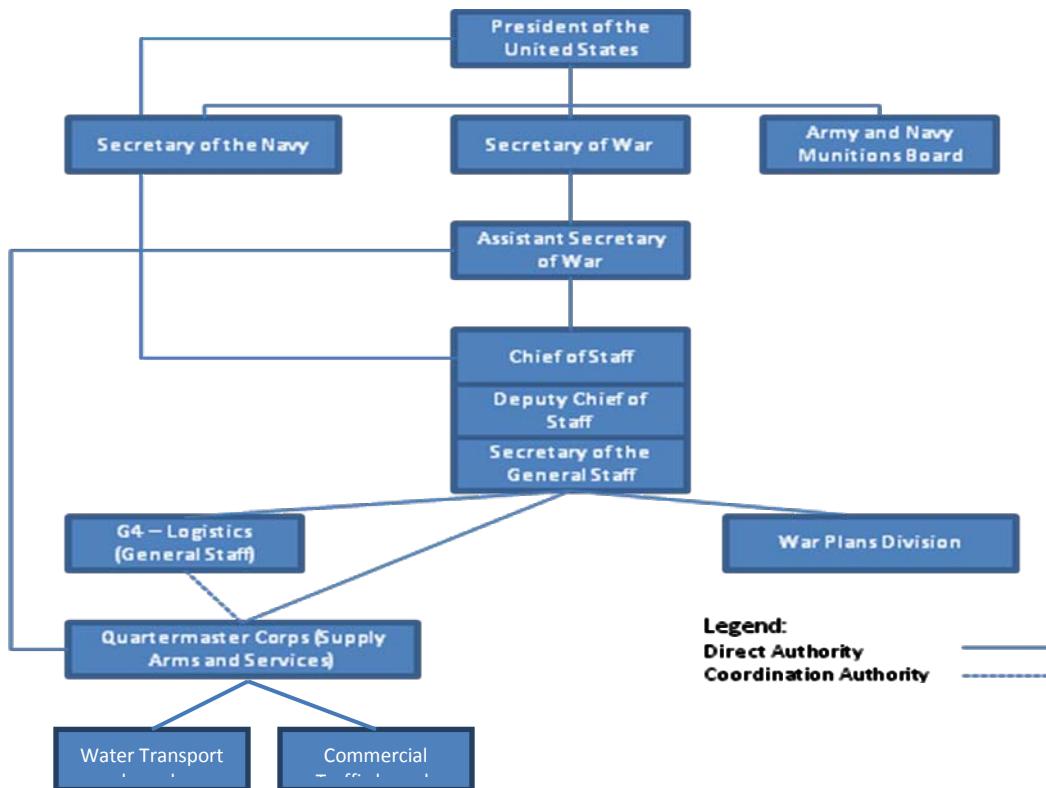


**Figure 1: Command relationships of Maritime Shipping Prior to WWII**  
**US Army Shipping Management**

The Army logistical elements responsible for the planning and management of shipping centered within the Quartermaster General purview up to 1939 (See Figure2: The Peacetime Army: September 1939 (Logistic Entities and Command)). War planning and war-gaming constantly went under revision on how to logically support with merchant shipping the requirements during a two front war. The command structure responsible for shipping management:(See Figure 2 – The Peacetime Army: September 1939 Logistic Entities and Command). The Transportation Corps did not exist initially to support the planning and management of the US Army. Subdivisions within the Office of the Quartermaster General managed shipping: the Commercial Traffic Branch orchestrating commercial shipping, and a Water Transport Branch to manage US Army transports including operation of transports and ports of embarkation, assignment of transports and harbor boats.<sup>31</sup> This arrangement of shipping management for the US Army did not alter until the US entrance into World War II. The Transportation Corps creation did not occur until the beginning of WWII, when the importance of managing all means of transportation responsibilities expanded worldwide provoking a new Corps to handle it.

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<sup>31</sup> Chester Wardlow, *US Army in World War II, The Technical Services, The Transportation Corps: Responsibilities, Organization, and Operations* (Washington D.C., Office of the Chief of Military History, Department of the Army, 1951), 36-37.



**Figure 2: The Peacetime Army: September 1939 Logistic Entities and Command, Source: Global Logistics and Strategy 1940-1945, p 24.**

The brink of WWII found the Army Transportation Service taxed. Forces in the Pacific required commercial vehicle contracting to supply. The destroyer for base program between the United States and Great Britain furthered the burden. The Army garrisoned and required resupply in Caribbean, Greenland, Iceland, Hawaii, Philippines and Alaska. Due to overall shipping shortages within the US, the Army transports also backhauled critical materials on their return trips. This backhaul caused more delays while doing supply turns.<sup>32</sup> Availability of Army seagoing vessels continued to plague operations and plans.

During the interwar period, the Army Transportation Service appeared quite taxed but still conducted limited joint operations for amphibious training. The Marines, Navy and Army executed Fleet Landing Exercises from 1936-1940 to test equipment and doctrine, identify shortfalls in equipment and

<sup>32</sup> Larson, 4.

train.<sup>33</sup> The Marine Corps developed, practiced, and created new technologies and tactics to conduct amphibious operations. To support this, the US Army transferred some of its ocean transports to the US Navy to support the US Navy mission.<sup>34</sup>

## **Maritime Commission Leadership**

The creation of the merchant marine civilian management agency, the MC, became an integral part of WWII. Surface vessels provide the only realistic manner of moving large tonnage or volume of supplies. To prevent any one person from wielding too much influence on the economy, the management body became a commission.<sup>35</sup> The commission comprised of initially four and later five people.<sup>36</sup>

Four commissioners existed in 1937. The first among equals being Mr. Joseph P. Kennedy who managed the personnel, financial and general functions as the principle commissioner. Admiral (USN ret.) H.A. Whiley accounted for the training of ship personnel. Mr. Thomas Woodward, a lawyer by trade, dealt with the legalities, rates and regulations. Rear Admiral (USN ret.) Emory 'Jerry' Land presided over ship design and construction. These commissioners answered to the President of the United States and US Congress. The Commissioners first order of business encompassed reestablishing maritime responsibilities from the Department of Commerce. With some initial difficulties, the true trials and tribulations developed in the late 1930s were endured by a different configuration of commissioners.

By 1940 and 1941, the Commission leadership changed prior to President Franklin D. Roosevelt applying pressure on the commission to provide vast quantities of merchant shipping. Commissioner Kennedy resigned in 1938 as the chairman and the post transferred to the capable hands of Rear Admiral Emory 'Jerry' Land. Land served as a construction specialist for the Navy as opposed to a line officer. Land proved ideally suited to tackle the congressional requirements of the MC. ADM Land assumed the

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<sup>33</sup> Millett, 76.

<sup>34</sup> Larson, 4.

<sup>35</sup> Lane, 19-20.

<sup>36</sup> Ibid.

role of all the external relations for the Commission. He did all interfacing with the White House, Congress and the media. Woodward retained his position throughout the Second World War. The fifth commissioner, Mr. John M. Carmody, served throughout the war once emplaced in 1941 as the commissioner focused on business activities. Captain (USN ret.) Edward Macauley assumed the focus of Mr. Whiley for seamen training in 1941. Commander (USN ret.) Howard Vickery became the next most influential member of the board, aside from ADM Land, regarding planning and building of maritime shipping. CDR Vickery came from a background in shipbuilding construction and engineering allowing him to take over those responsibilities from ADM Land.<sup>37</sup>

ADM Land and CDR Vickery greatly influenced the planning and monitoring of the construction of merchant shipping. Construction to meet the demands of the British and American war aims superseded costs. However, the commission kept construction costs at a reasonable level and addressed the training and labor at the yards. The fleet created a need to convert to transport and supply vessels in a time of national emergency according to the Merchant Marine Act of 1936. The MC needed to coordinate with the Navy to ensure shipping could adapt to support national defense requirements as part of the military support requirement.<sup>38</sup>

## **US Army Planning**

The United States Government slowly prepared for what appeared inevitable in the 1940s. Both the Department of War and Department of the Navy started providing the initial estimates for a global war. The US military conducted multiple annual planning exercises to produce and revise the 1930s color named plans. The Rainbow series of plans developed over the course of the interwar period spent a large portion of the planning to shipping requirements. The naval aspects of war planning against the Red (Great Britain) and Orange (Japan) greatly increased the awareness of the United States in conducting a

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<sup>37</sup> Lane, 14-15.

<sup>38</sup> Merchant Marine Act of 1936.

two front war across vast oceans. They did not limit the requirements for shipping based on availability<sup>39</sup>, after all, the Army Transportation Service had eight ships in 1939 in its service. This included the assigned and loaned vessels from the MC.<sup>40</sup>

The Orange Plan against Japan best exemplified the focus of merchant shipping requirement planning. Military operations in the Pacific identified shipping resources as early as 1934.<sup>41</sup> For support vessels, the requirements outlined to maintain a single outpost from Plan Orange:

<i>Type and Use:</i>	<i>About</i>
Barracks Ships for base personnel, 36,000 men, 500 per ship	72
Cargo and store ships, 20,000,000 cu. ft. at 325,000 per ship	60
Fuel Ship, 500,000 tons, 9,000 per ship	55
Additional Hospital Ships, 4,000 beds at 500 beds per ship	8
Additional AE (ammunition cargo)	undetermined
Additional vessels to carry aircraft crated	
450 VF at 1430 = 643,500 &	
50 VO at 1430 = 71,500 = 3 ships	
450 VT at 5327 = 2,397,150 = 9 ships	<u>12</u>
Total for above:	about 207
Additional repair and tender vessels for additional ships	<u>5</u>
Total	212
Additional dry docks, for two dockings per ship, 2 days, 2 Class C-1	
Additional personnel, average 12 officers, 150 men, 2600 off. 32,000 men	
Additional fuel, water, stores, etc not estimated	
Local Defense Force not considered <sup>42</sup>	

These numbers supported only one location and did not incorporate worldwide commitments. The US Army and US Navy recognized how additional operational efforts required additional shipping.

The Army realized it would be required to conduct amphibious operations in the event of war. The Army War College (AWC), by conducting annual war-gaming exercises, concluded the improbability of retaining the Philippines in the event of a war with Japan. The only means to prosecute

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<sup>39</sup> Gole, 154.

<sup>40</sup> Larson, 4.

<sup>41</sup> Gole, 39.

<sup>42</sup> Office of Naval Operations, Navy Department, Basic Orange Plan OP-12D-LMS, 1927, National Archives

the war in the Pacific Theater would be to conduct a number of operations involving amphibious landings on key islands across the Pacific.<sup>43</sup>

## **The Maritime Commission Builds Ships in Waves of Production**

In 1940 and 1941, before the significant event of Pearl Harbor, the shipbuilding requirements for MC provided an incredible resource challenge. Without the mobilization of the country for war, coordination and regulations had precedence over ‘get it done.’ This did not change the requirements of the Navy and Army to acquire the transports and supply vessels to conduct a worldwide war.

The MC initiated some large-scale expansion projects to meet the needs the military and President Roosevelt directives. Five waves of production expansion existed. Three occurred prior to the entrance of the United States into the war. The first wave comprised of an assistance program for the British and the initial push of 200 ships for the US merchant fleet in January 1941. The second wave commenced when the US Congress passed the Lend-Lease program in April 1941. The third, less distinctive, wave involved no one event. It encompassed a number of supporting activities and other areas not addressed by the first two waves. The third wave lasted from the spring 1941 until December 7, 1941 when war broke out between Japan and the United States.<sup>44</sup>

The first wave involved the MC’s emergency preparations involved with assisting the British. The Royal Navy floundered in a desperate tonnage war in the Atlantic against the U-boat’s of Admiral Doenitz. Naval fighting ships filled the ways in Britain but could not replace the suffering in the Atlantic. Winston Churchill collaborated with the United States and ordered sixty vessels. The British requested vessels that an American firm designed for the British. The MC reviewed the designed vessel. Its speeds on the high seas and limited advancements in shipping technology precluded it from being an ideal ship. However, it simplified and provided use of quick repetitive construction methods. The British even

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<sup>43</sup> Gole, 120.

<sup>44</sup> Lane, 40

offered financing new shipyards to assist in the construction. The British placed the order with the Todd-Kaiser Company though the ships would not be available until late 1941.<sup>45</sup> In conjunction with the British putting a large order for construction, President Roosevelt continued his preparations for the future. FDR ordered two hundred vessels on 3 January 1941. FDR intended to push the vessels to the British once completed.<sup>46</sup>

The United States Congress initiated the second wave when it passed the Defense Aid Supplemental Appropriation Act in March 1941.<sup>47</sup> This provided the well-known Lend-Lease program. It increased the construction requirements by nearly 300 more vessels, a third of them tankers.<sup>48</sup> It also allowed the shipbuilders in America to work on British flagged ships in American dockyards. Overall, the second wave infused the MC with real financial assistance needed to start the emergency shipyards of World War Two.<sup>49</sup> Yard construction contracts started all over the United States including Maine, Louisiana, Washington and California. The MC projected the expansion to 45 ways in December 1940. By December 1941, projected number of ways exceeded 200.<sup>50</sup>

The third expansion encompassed a conglomerate of activities from April 1941 to December 1941. The four major aspects of it:

1. smaller vessels design for the British,
2. Ore carriers,
3. Tugs with ocean going capability and concrete barges, and
4. Major endeavors for the ship types from the first two waves.<sup>51</sup>

The lengthy timeline and effort of the MC to provide shipping proved problematic. The US population remained unconvinced in mid-1941 of the need to involve the US in WWII.<sup>52</sup> The resources to

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<sup>45</sup> Ibid, 54.

<sup>46</sup> Ibid, 45.

<sup>47</sup> Ibid, 55.

<sup>48</sup> Ibid, 56.

<sup>49</sup> Ibid, 58. This brought into the Maritime Commission control of the first of the Emergency Shipyards using the near assembly line methods of ship construction.

<sup>50</sup> Ibid, 59.

<sup>51</sup> Ibid, 60.

continue the level of ship construction stressed critical resources such as steel and rubber.<sup>53</sup> The situation with critical material persisted throughout WWII for the MC.

## **Conclusion**

Prior to the United States entering into WWII, the MC became involved in three waves of shipbuilding to meet the needs of the United States. Dialog occurred between the United States and Britain to support the hurting British Isles. The MC ramped up the methods and locations for shipbuilding on both the East and West coast of the United States. The US Army continued to manage shipping as a separate requirement with its own shipping but fell short as additional requirements increased to garrison bases worldwide. The MC and the US Army initially interacted on only a limited basis.

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<sup>52</sup> Ibid, 64.

<sup>53</sup> Ibid, 65.

## CHAPTER 3: The beginning of WWII

A friend of mine in the Army once told me that the primary mission of the Army is to enforce its will on the enemy. Considering my own experiences, I believe this to be true. The only thing I can add is that sometimes the Army does not seem to know the difference between its enemies and its friends.

Donald M. Nelson, *Arsenal of Democracy: The Story of American War Production*

Roosevelt and military planners placed strong emphasis on strategic planning and use of US maritime shipping during the first year and a half of WWII. The formal declarations of war against Japan and Germany in December 1941 officially brought America into the contest. The neutrality protections on American shipping no longer applied. America threw all of its considerable resources into the fray nearly overnight. Though the hearts and minds of Americans seemed fully engaged in the fight, a national economy cannot change instantly. The governmental oversight of the national economy and resources reacted quickly to speed the process. A number of governmental commissions and boards became empowered through Congress in December 1941 by the war declaration and subsequent acts and bills to support the war effort.

The Germans reacted to the declaration of war rapidly in the Battle of the Atlantic. The German U-boat campaign previously avoided the US convoys and warships until Hitler declared war on the United States in support of the Axis Agreement with Japan. A couple US-German engagements occurred on the high seas. The actions taken by the United States to protect shipping going to Britain forced unavoidable engagements.<sup>54</sup> The declaration of war opened the Eastern Seaboard for U-boat hunting of unprotected shipping. The results proved drastic. German U-boats sank large amounts of tonnage though few U-boats possessed the operational range to affect the US Eastern shores. The US finally listened to British advice to mitigate the U-boat threat. The US countered the German U-boat rampage with the use of convoys, air coverage, the development of effective sonar and breaking German radio encryption.<sup>55</sup>

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<sup>54</sup> Karl Doenitz, translated by G.H. Bennett and R. Bennett, excerpt from *Hitler's Admirals* (Naval Institute Press, Annapolis, MD, 21402), 97.

<sup>55</sup> Gordon Harrison, *Cross-Channel Attack* (Office of the Chief of Military History, Department of the Army, Washington, D.C., 1951), 84.

The Japanese reacted nearly as fast as the Nazi allies did. They defeated and pushed the United States and Britain out of the Southern Pacific in short order by May of 1942. The Japanese immediately attacked shipping enroute to the Philippines. The Japanese sunk one vessel, captured one, and eight escaped to friendly ports.<sup>56</sup> Only a single hospital ship left the shipping port in the Philippines.<sup>57</sup> Limited resources in shipping became more acute with the war commencing in the Pacific. The Japanese controlled the entire Asia Pacific area except the vital sea lines of communication that opened from Australia to the west coast of the US. This lane proved to be especially important for the Lend-Lease program supporting the European Eastern Front with equipment.<sup>58</sup>

Following the surprise attack by the Japanese Navy at Pearl Harbor, the US Congress declared war against the Axis powers. The United States committed to a European strategy first.<sup>59</sup> The United States Army broached the British about a northern European invasion in 1942. The shipping logistical feasibility failed to support any attack in 1942.<sup>60</sup> Prime Minister Churchill successfully diverted the effort in 1943 to attack the soft underbelly of Europe. This resulted in the Allies attacking the Northern Coast of Africa in OPERATION TORCH.

## US Command Relations

President Roosevelt created a chain of command that had great depth and great breadth. In February 1942, an additional two agencies jointed the process. The War Production Board had sub-boards

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<sup>56</sup> Larson, 8.

<sup>57</sup> James Masterson, *U. S. Army Transportation In The Southwest Pacific Area 1941-1947, Monograph*, Transportation Unit, Historical Division, OCT 49, 30.

<sup>58</sup> Richard M. Leighton, Coakley, Robert W., *Global Logistics and Strategy 1940-1943* (Office of the Chief of Military History, Department of the Army, Washington, D.C., 1955), 349. The map depicts it clearly as a route used to supply the Persian Gulf. Masterson's monograph also discusses the buildup in Australian facilities to support the additional supply demands on page 20.

<sup>59</sup> Mark Skinner Watson, *US Army in World War II, The War Department, Chief of Staff: Prewar Plans and Preparations* (Office of the Chief of Military History, Department of the Army, Washington, D.C., 1950), 376-7. This was a result of the American, British, Canadian (ABC-1 and ABC-2) agreement prior to the war. The offensive target was any nation threatening England while maintaining a defensive posture if the Japanese entered the war.

<sup>60</sup> Leighton, 156.

and committees to assist in resource management for the economy. The WSA reported directly to the President, not the MC (See APPENDIX 2, The War Shipping Administration Order). The Army and Navy had the same positions and continued to report directly to the President. (See Figure 3 –Merchant Shipping Managers Command Relations). Prior to the entry of the United States into WWII, the MC, the Army and the Navy all had their own way of setting priorities and meeting requirements.

The War Powers Act of 18 December 1941 greatly affected the maritime effort. President Roosevelt used his newly acquired executive powers to create a couple of key agencies linked to shipbuilding and shipping management. FDR created the War Production Board (WPB) responsible for all economic elements in the US. FDR also created the WSA responsible for management of all available merchant shipping and US port operations. Roosevelt held a meeting on 15 January 1942 and appointed Donald M. Nelson as the head of a new War Production Board.<sup>61</sup> The War Powers Act also empowered the President to transfer powers to other agencies from previously established commissions. Roosevelt used this act to transfer some of the MC's responsibilities to the WSA. On 7 February 1942, the President made ADM Land the Administrator of the newly formed WSA.<sup>62</sup> Land retained responsibilities as a commissioner in the MC and effectively executed both roles.

As a former secretary of the Navy, President Roosevelt understood the situation with shipping. His experience caused him initially to use a “Strategic Shipping Board comprised of the Chief of Staff [of the Army], Chief of Naval Operations and the Chairman of the MC, the latter member representing merchant shipping.”<sup>63</sup> Strategic Shipping Board mission included to plan, coordinate, and establish policies of merchant shipping. The purpose required meeting military and civilian requirements for

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<sup>61</sup> Donald M. Nelson, *Arsenal of Democracy: The Story of American War Production* (Harcourt, Brace and Company, New York, New York: 1946).7-20.

<sup>62</sup> Lane, 161.

<sup>63</sup> Larson, 30.

shipping. The board did not last long.<sup>64</sup> However, it demonstrated the need for a central management agency for the United States. It took the form of the WSA.

## **US Army Command Changes**

By September 1942, the US Army command structure-supporting transportation planning looked much different from that which existed prior to entry into WWII. Availability of shipping to move soldiers and support equipment proved to be one of the significant limiting factors on the timing of an attack by the US and Britain.<sup>65</sup>

The US Army shipping management changed as did the civilian management of merchant shipping. The Army continued to evolve over the first 18 months of WWII. The US Army command responsible for transportation planning and management at the entry of the US into WWII lacked transportation emphasis (See Figure 4 – Army Organization December 1941). The reorganization of the War Department on 9 March 1942 created the Chief of Transportation Service. On 31 July 1942, the Chief of the Transportation Service re-designated the Chief of Transportation and created the Transportation Corps from the Transportation Service.<sup>66</sup> The Transportation Corps first contributed to the arrangement of commercial rail, highways and water carriers in the zone of the interior. The first objective included the provision of shipping and the operations of ports and embarkation for overseas Army traffic. The second objective demonstrated control of troop and supply movement by domestic origins to the overseas ports of embarkations. This caused great discord with the relations between the

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<sup>64</sup> Larson, 32.

<sup>65</sup> Louis Morton, *The War in the Pacific: Strategy and Command: The First Two Years* (Office of the Chief of Military History, Department of the Army, Washington, D.C., 1962), 22-29. President Roosevelt, Prime Minister Churchill, British and US planners went through a number of iterations of how and when for the cross-channel attack.

<sup>66</sup> Masterson, 18.

MC, WSA and US Army.<sup>67</sup> By the fall of 1942, the US Army command responsible for transportation changed considerable from 1941 (See Figure 5 – Army Organization September 1942).

## The US Economy Management

Civilian management of the economy fell under the War Production Board established under the authority granted to the President. Executive Order 16 January 1942 gave Donald Nelson the following responsibilities as Chairman of the Board:

- Exercise general direction of the war procurement and production programs
- Determine policies, plans, procedures and methods of the several federal departments and agencies in regard to war production and procurement
- Grant priorities for construction
- Allocate vital materials and production facilities<sup>68</sup>

This authority managed and divided resources and influenced a significant aspect of shipbuilding. The Requirements Committee had the presidential authority to allocate natural and machined resources to the locations that required the most. As the war officially started in America, the demand for civilian businesses, war productions and military construction needed limited resources such as steel, rubber, tin, lead and copper.

Scarce resources required arbitration due to the continuing conflicts with the MC, Army, Navy, WPB and the Lend-Lease program. The Army Navy Munitions Board (ANMB) used a rating system to arbitrate the requirements. The ANMB recommendations went to the WPB for resource allocation. The agreement that supported the settling of the significant friction on resource allocation took place in September 1942. The four major consumers of raw materials-- the United States Army, the United States Navy, the MC and the public economy-- represented the committee.<sup>69</sup> The rating system the ANMB used to allocate steel proved to be of great importance. Prioritization proved very difficult with

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<sup>67</sup> Wardlow, 57.

<sup>68</sup> Alan L. Gropman, *Mobilizing US Industry in World War II; Myth and Reality* (Government Printing Office, Washington, D.C., 1996), 57.

<sup>69</sup> R. Elberton Smith, *The War Department: The Army and Economic Mobilization* (Government Printing Office, Washington, D.C., 1959), 509.

significant conflict between the US Army, Navy and Marine Corps. Conflict involved the demand for warships, merchant ships, bombers, fighters, tanks, jeeps and war material to support Allies within the Lend-Lease program.<sup>70</sup>

The Lend-Lease program used the Australian route to support the Soviet Union through Persian Gulf region. The difficulties with avoiding Japanese warships required using the Australian coastal region as safehavens. The route went through the Indian Ocean instead of attempting to run the Axis gauntlet of the Atlantic. As the Lend-Lease program extended to the Soviets, the former protectorates of Britain, Persian Gulf countries became the only means of getting the quantity of supplies they required by ship. However, the port facilities within the Persian Gulf exhibited inadequacies. The responsibility for the construction, management and productivity of the port in Persia belonged to the WSA. This created friction initially with the United States Army as they saw the mission as theirs, particularly in regards to the utilization of the local stevedores. The senior levels of the MC and WSA had to intervene in the situation to establish clear control of the ports.<sup>71</sup>

## **The Maritime Commission and War Shipping Administration**

The MC and the WSA, two large organizations, had some similar functions as well as some that differed in marked ways. No divergence occurred as each organization had a clear division of responsibilities. Conversely, the Navy, the Army and WPB frequently differed with the MC or the WSA regularly. Most of the time, concurrently, both the MC and the WSA received tremendous pressure from the Army and Navy.

The WSA and the MC served a couple of congruent missions. The MC retained responsibility for shipbuilding, labor associated with shipbuilding, legal issues and shipbuilding contract management. Executive Order number 9054 on 7 February 1942 authorized the creation of the WSA under the First

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<sup>70</sup> Lane, 314.

<sup>71</sup> T. H. Vail Motter, *United States Army In World War II, The Middle East Theater, The Persian Corridor and Aid to Russia* (Center Of Military History United States Army Washington, D. C., 1952), 390.

War Powers Act. The WSA assumed responsibility of port management, port labor and all merchant shipping. The US had a limited number of ships for its use, any additional ships needed came through the WSA as support requests (see APPENDIX 3 – US War Department and WSA).<sup>72</sup> The USN had its auxiliary fleet for its needs. Additional merchant shipping requirements went to WSA for resourcing in similar fashion as the War Department. The WSA allocated all available resources considering Lend-Lease, domestic shipping requirements, the USA and USN. In the first 18 months of WWII, limited resources constrained the desires of the US Armed Forces from commencing offensive operations.<sup>73</sup>

The MC importance greatly increased but quickly became overwhelmed with too much to do. This contributed to the MC turning into two separate entities: the WSA and MC. Approximately 1,700 people managed the MC in early 1940. When the Japanese Imperial Navy attacked Pearl Harbor on 7 December 1941, approximately 2400 personnel in the MC existed. The augment of roughly 600 people assisted the ever-increasing task of construction supervision and planning.<sup>74</sup> Involvement in labor forces demonstrated a principle similarity of the two organizations. The MC addressed shipbuilding labor. The WSA worked with port labor management. With WSA focused on available shipping management and port operations, the MC continued the waves of production. The fourth and fifth waves of production expansion occurred in 1942.

## **The Maritime Commission Continues the Waves of Production**

Prior to the US entrance into the war, President Roosevelt had pushed the MC to produce five million deadweight tons<sup>75</sup> of shipping for the year of 1942. Production of seven million tons existed as an

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<sup>72</sup> C. C. Wardlow, *Monograph #10: Operating Relationships of the Office of the Chief of Transportation with Civilian Government Agencies*, Historical Unit, Office of the Chief of Transportation, Army Service Forces, January 1945. Retrieved from the Combined Army Center of Learning digital Library, 4 August 2010., 37-39.

<sup>73</sup> Morton, 22-29.

<sup>74</sup> Lane, 127-8.

<sup>75</sup> Definition: deadweight tons in shipping is the difference between what a ship displaces with its full cargo (load draft) and what it displaces without cargo (light draft). *The New Lexicon Webster's Dictionary of the English Language* (Lexicon Publications, INC., New York, 1989), 247.

expectation in 1943. The fourth wave served as a national push to do more without significant increase in resources or work force. The President changed the desired tonnage almost immediately to eight million tons for 1942 and ten million for 1943. It evolved directly because of the surprise attack by the Japanese Navy on the American Naval Fleet at Pearl Harbor. The expected increase in production requirements revealed the resources as nearly exclusive to current supplies. The country seemed unaware of the stakes as they surged into the war effort. A marginal increase in the number of ways for shipbuilding reached only 10% lessening the expectations of current shipyards reaching a production increase of 25%.<sup>76</sup> The conditions to allow the required production accomplishments occurred in time to meet production requirements. Throughout the coastlines on both East and West of the US, construction of the ways to support the increase in production would finish in time to meet the 1943 directives. By addressing labor and steel issues, the push became possible.

The requirement did not last three months before production requirements increased again. This created a need for yet another push in the waves of production. The fifth and final wave is identifiable as early March 1942. The numbers pushed the MC production capabilities beyond the capacity of current and planned ways across America. As Land put it, “the shipbuilding cup is full to overflowing.”<sup>77</sup>

Nevertheless, it induced the fifth wave of production. On 19 February 1942, a conference between FDR and Land occurred in the president’s bedroom. They discussed an increase in production demands. FDR increased the requirement to a total of eighteen million tons in 1942-43 to twenty-four million tons: nine million in 1942 and fifteen million in 1943.<sup>78</sup> Additionally, the MC began assisting the US Navy with vessel construction. The Navy started converting MC construction ways to commence warship production. The US Navy also converted a number of merchant ships into jump carriers.<sup>79</sup> The

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<sup>76</sup> Lane, 138.

<sup>77</sup> Ibid, 143.

<sup>78</sup> Ibid, 144.

<sup>79</sup> Ibid, 149.

major assistance provided to the Navy construction efforts did not fully develop into the production system until late 1943.

## **US Army Europe**

Operation Torch demonstrated how the correct resources, planning and production converged when conducting the largest operation involving shipping to that date in the war. The US Army received political pressure to divert Germany's efforts with another front. An additional front relieved some of the immense pressure applied by the Germans on the Soviet or Eastern Front.<sup>80</sup> Demands on an immature support system included the two fronts of Japan and Europe demanding shipping support, the Lend-Lease aid to the Soviet Union and resupplying Britain. US planners initially intended OPERATION TORCH execution in mid-September 1942.<sup>81</sup> The British and US Navy experienced indicators of trouble supporting multiple amphibious landings and escort the movement of convoys.<sup>82</sup> The timeline consisted of the constraints of escorting and landing craft availability (see APPENDIX 4 – OPERATOIN TORCH Planning Numbers). Commanders of any operation do not desire last minute resupply. OPERATION TORCH commanders wanted to keep a number of resources on ships as a floating reserve. The shortage of shipping tonnage available for all aspects of the war effort could not afford to have ships sitting idle.<sup>83</sup>

## **US Army Pacific**

The Pacific Theater provides another example of US Army shipping management. The transportation management for the US Army fell under the theater command as supply. The relation underwent numerous changes from December 1941 through February 1943. As it eventually unfolded, the

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<sup>80</sup> George F. Howb, *US Army in World War II, Mediterranean Theater of Operations, Northwest Africa: Seizing the Initiative in the West* (Office of the Chief of Military History, United States Army, Washington, D.C., 1957),11

<sup>81</sup> Harrison, 25.

<sup>82</sup> Howb, 27-28

<sup>83</sup> Leighton, 612.

Southwest Pacific Area commanded by GEN Douglas McArthur as of 26 February 1943 entailed a number of units and organizations. The command, headquartered in Australia until the two-axis attack across the Pacific, became responsible for logistics and movement (See APPENDIX 5, Pacific Theater CDR Theater Managing Logistics and Transportation).<sup>84</sup> In particular, a G-4 Administrative Order existed -- Plan X -- that outlined some of the logistical responsibilities overseen by the headquarters in Australia through February 1943. A dispatch dated 20 December 1941 stated the "Commanding General, USFIA, under the direction of the Commanding General, USAFFE, would control water transportation in the Far East. On request of the Commanding General, USFIA, the War Department would supply vessels and other transportation equipment not available locally."<sup>85</sup> Pacific operations of island hopping along two axis of advance did not start until late 1943. However, a fair number of resources became required to support holding actions conducted in the Pacific. It required more initially from shipping resources than the European theater even though the US committed to a Europe first policy.<sup>86</sup> Preparing to protect the Philippines, the pacific theater also had requirements to support lots of shipping. Six vessels resupplied the Philippines in both September and October of 1941. Eight more sailed in November. The advent of WWI and interdiction by the Japanese prevented the scheduled sixteen vessels in December 1941, 25 for February 1942 and six in March 1942.<sup>87</sup>

## Conclusion

The years up to mid-1943 attested to difficulty. The available shipping could not accommodate the needs of the Army, Navy, US economy Lend-Lease programs and resupply Britain. The waves of production by the MC provided the necessary boost to reverse the losses induced by the Axis. The WSA

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<sup>84</sup> Masterson, 44.

<sup>85</sup> Ibid, 48.

<sup>86</sup> Mark Skinner Watson, *US Army in World War II, The War Department, Chief of Staff: Prewar Plans and Preparations* (Office of the Chief of Military History, Department of the Army, Washington, D.C., 1950), 376-7.

<sup>87</sup> Masterson, 29.

freed the MC to focus on construction. The WSA also provided a means to centralize, allocate according to national priorities and support all merchant shipping requirements. The WPB allocated resources for production, directly influencing the ability of merchant ship construction. The US Army had reorganized shortfalls and reorganized to better plan and manage capabilities.

OPERATION TORCH in Africa and the buildup of forces in Australia demonstrated how merchant shipping constrained operations. By mid 1943, the battle for shipping crested. By the end of 1943, the Allies mitigated the Axis ability to interdict convoys. The construction programs of the MC greatly increased the available shipping for the WSA to manage. A great example of just how fast and by how much is OPERATION OVERLORD.

## CHAPTER 4 – OPERATION OVERLORD

OPERATION OVERLORD dwarfed all other amphibious operations to that point in history. The execution of the operation demonstrated the significance of shipping. OVERLORD demonstrated the vital importance of ship production, management and planning to the Allied war efforts in WWII. The buildup and preparations took place predominately from January 1944 until the operation on 6 June 1944. The operation took nearly two years to plan starting in 1942. As early as the 1930s, US military planners identified equipment requirements to undertake a large amphibious assault akin to OPERATION OVERLORD.

### **Prior to the US Entering World War II**

Prior to the entry of either the British or Americans into World War II, their militaries recognized the need for specifically designed amphibious landing ships. A number of observed Japanese amphibious landing exercises in the 1930s convinced British and US of the utility of specifically designed amphibious ships. Initially the US Navy and US Army intended to modify merchant shipping and passenger liners for personnel movements. The US Navy and US Army also required specially designed landing vessels to land and load military equipment.<sup>88</sup>

The British entered the war earlier than the US and failed to maintain a foothold on the European continent. At Dunkirk in 1940, the British experienced the need for a vessel that could load and unload from unimproved beaches. Dunkirk lacked the port facilities traditionally required to move equipment off or on ships. The British effectively evacuated soldiers. However, nearly all British equipment fell into German possession due to the absence of a port to load equipment. The Dunkirk experience, and observing Japanese exercises, led the British specialized vessels to support amphibious operations - landing ship, tanks (LSTs).

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<sup>88</sup> Millett, 79-83.

Shipyards in Britain focused on building warships instead of merchant shipping to counter the U-boat threat in the Battle of the Atlantic. Accordingly, shipbuilding focused on construction of anti-submarine warfare escort vessels in support of that battle. Additionally, the British Admiralty built three landing ships to test amphibious landing concepts but lacked the ability to produce the quantities required. In 1941, the British Admiralty requested US MC assistance in constructing shipping. The British requested merchant shipping and landing ship tanks. The British produced a design that necessitated reengineering by the MC for mass production in the US shipyards.<sup>89</sup> The MC contracted shipbuilding companies to produce LSTs as early as 1941 to support the British. The first MC produced LST was built in late 1942.<sup>90</sup>

## **The US Entrance to World War II – Plans Are Made**

After the Japanese surprise attack on Pearl Harbor, the US entered World War II on the Allies side. The Allied military and political leaders began a strategic dialog starting in spring of 1942 for a possible assault on the European mainland. The British planners and leadership expressed concerns about the logistical feasibility of such a large operation at that time. US strategic leaders envisioned assaulting the European continent with amphibious operations as early as 1942.<sup>91</sup> There was only enough shipping to embark six divisions, to include initial sustainment, over a twenty-one day period in 1942.<sup>92</sup> Based upon the German order of battle in France, six divisions was far too small a force to offer any hope of success against the German defenses.<sup>93</sup>

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<sup>89</sup> Lane, 609.

<sup>90</sup> Maritime Commission Contract Completed and Maritime Hull Number Identification Report, [http://appendix.usmaritimecommission.de/documents/documents\\_main.htm](http://appendix.usmaritimecommission.de/documents/documents_main.htm) (accessed 5 July 2009), 73.

<sup>91</sup> Gordon A. Harrison, *The European Theater of Operations Cross-Channel Attack* (Office of the Chief of Military History, Washington, D.C., 1951), 21.

<sup>92</sup> *Ibid*, 21.

<sup>93</sup> *Ibid*, 22.

The US planner's intent to conduct the operation in 1942 appeared overambitious. US planners intended to "act in 1942, not 1943" in Europe.<sup>94</sup> The eager US planners did not account for the logistical shortfalls to conduct a major amphibious operation. They were especially naïve and overoptimistic about the amount of required shipping for such a vast operation. The US lacked the required quantity of Army personnel in order to assault and seize a beachhead lodgment to threaten continental Europe. To project and sustain an assault of this magnitude necessitated more shipping than the US had. Prime Minister Churchill successfully persuaded FDR and US military planners against conducting the continental assault in 1942.<sup>95</sup> The planning involved in the process in 1942 assisted with planning future operations.

British and US planners and politicians eliminated assaulting Europe in 1942 due to logistical constraints. British and American planners explored 1943 as a possible invasion window. In March 1942, General George C. Marshall, the US Army Chief of Staff, proposed a cross-channel attack for 1943.<sup>96</sup> The US plan, codenamed SLEDGEHAMMER, outlined an assault on the European continent.<sup>97</sup> The Allied planners continued to view the assault differently. The US continued to emphasize Europe whereas the British focused on protecting their sea lines of communication in the Mediterranean. Thus, assaults on Sicily and Italy made more sense to them. Continued logistical constraints restrained and hampered efforts on the European front. The US War Department continued to view the European theater as critical to victory for the Allies. The Roosevelt Administration, however, did not hold the same priorities for the war effort. Roosevelt directed the Lend-Lease program supporting the Soviets to have priority on shipping.<sup>98</sup> In retrospect, given the Soviet Union's dire situation in 1942, this was the correct priority.

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<sup>94</sup> Ibid, 21.

<sup>95</sup> Ibid, 23.

<sup>96</sup> Ibid, 15.

<sup>97</sup> Ibid, 27.

<sup>98</sup> Leighton, 156.

## Operations Strained Merchant Shipping

The British viewed attacking the European continent in 1943 as unlikely to succeed. Prime Minister Churchill successfully convinced the Americans to first attack what he regarded as the “soft underbelly of Europe”—the Mediterranean, southern Europe and the Balkans.<sup>99</sup> OPERATION TORCH started the attack on the North African coast. The decision to conduct North African operations in early 1943 compromised the timing of the European continental assault.<sup>100</sup> Shipping requirements to support TORCH prohibited any possible assault on Europe. Coupled with the Lend-Lease requirements supporting the Soviet Union, little shipping remained for additional fronts. The shipping required to support Britain, the Soviet Union and contain the Japanese significantly stressed available shipping for the US Army and the WSA.<sup>101</sup>

Conducting OPERATION TORCH in 1943 strained available shipping. Nonetheless, TORCH validated many untested amphibious assault concepts. The limited number of LSTs used in the operation demonstrated the great versatility of this type of landing vessel for increase speed to build up combat power quickly at any location. The importance of port facilities became prominent in sustaining any operation. The concept of having a floating resupply became troublesome for WSA, but emerged as a great comfort to operational commanders.

Congruently, the US military conducted operations in 1942 and 1943 in the Pacific against the Japanese. The initiation of island hopping commenced in August of 1942 at Guadalcanal.<sup>102</sup> As Admiral William Halsey was conducting operations through the middle of the Pacific, General Douglas McArthur

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<sup>99</sup> Harrison, 25.

<sup>100</sup> Howb, 14.

<sup>101</sup> Leighton, 115.

<sup>102</sup> John Miller, Jr., *US Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive* (Office of the Chief of History, Washington, D.C., 1949), 60.

conducted simultaneous amphibious operations in the South Pacific in Papua New Guinea.<sup>103</sup> The operations jointly conducted by the US Navy and US Army would consume over half the available shipping until late 1943. The WSA shifted concentration of shipping to the European theater in the fall of 1943. On 31 May 1944, at the beginning of OPERATION OVERLORD, 799 vessels with capacity of 8,029,000 deadweight tons existed in Europe whereas the Pacific theater had only 482 vessels and 4,413,200 deadweight tons.<sup>104</sup>

## **Merchant Shipping Construction Catches Up**

After OPERATION TORCH, the US War Department recognized the need for more LSTs and requested construction from the MC. The MC was able to support with contracts for construction at multiple ways.<sup>105</sup> Shipping construction expanded profoundly against the backdrop of the operations during the summer of 1943. The Allied anti-submarine warfare efforts in the summer 1943 became more effective. The air coverage along convoy routes increased. The effect of signal intelligence became acute once the Allies fully exploited the German Naval Enigma equipment. By the end of the summer of 1943, the Battle of the Atlantic reached the tipping point where convoys steamed under far more secure conditions than the previous eighteen months.<sup>106</sup>

The MC's five waves of production<sup>107</sup> overcame losses and accounted for the natural uncertainties of war. The production capabilities within the shipbuilding industry in the US closed to near full potential. By summer 1943, the number of ships and total tonnage produced in ways exceeded losses.

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<sup>103</sup> Samuel Milner, *US Army in World War II, The War in the Pacific, Victory in Papua* (Office of the Chief of History, Washington, D.C., 1949), 377.

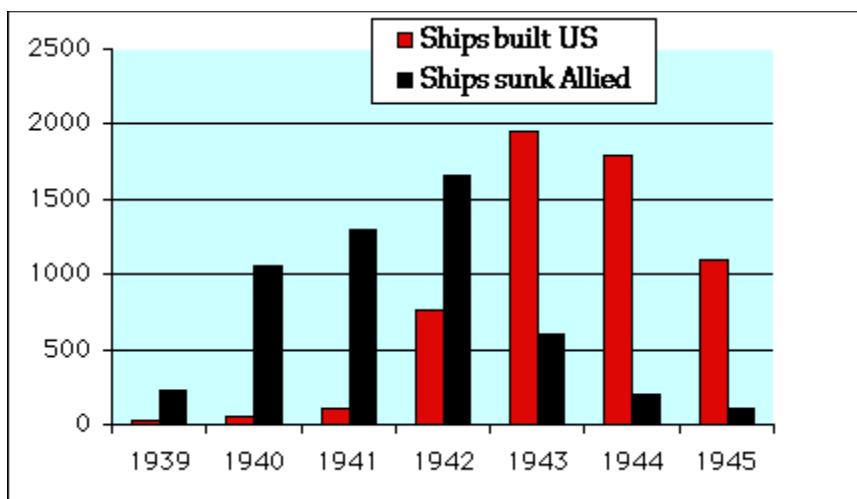
<sup>104</sup> Larson, 166.

<sup>105</sup> Lane, 176.

<sup>106</sup> Harrison, 84.

<sup>107</sup> See Chapter 2 (waves 1 through 3) and Chapter 3 (waves 4 and 5).

The available shipping from summer 1943 onward constantly increased for the Allies until the end of the WWII (See Figure 6 – Shipping Losses and Construction by Year).



**Figure 6 – Shipping Losses and Construction by Year** Source: United States Merchant Marine, <http://www.usmm.org/ww2.html>, accessed 20 September 2010.<sup>108</sup>

Once the plan for OPERATION OVERLORD was accepted and a target date agreed, the shipping industry started building in accordance with MC guidance.<sup>109</sup> The ways utilized assembly line production methods and resources steadily flowed into the shipyards to support construction. The production time for liberty ships steadily decreased as shipyards improved techniques and labor became familiar with production.<sup>110</sup> The increased speed of production opened ways faster than projected. This resulted in the MC to support the US Army request for LSTs without shorting the projection of cargo vessel construction for 1943. The MC contracted the Vancouver Yard in Oregon to build LSTs as a direct result of the Europe invasion plan.<sup>111</sup>

<sup>108</sup> Multiple sources support the rough numbers presented. For example, see Maritime Commission Contract Completed and Maritime Hull Number Identification Report, [http://appendix.usmaritimecommission.de/documents/documents\\_main.htm](http://appendix.usmaritimecommission.de/documents/documents_main.htm), accessed 5 July 2009, or, Eric Charles Talbot-Booth, *Merchant ships 1943* (McMillan, London, 1944). 387.2 M554

<sup>109</sup> Lane, 176-177.

<sup>110</sup> Ibid, 176.

<sup>111</sup> Ibid, 176.

## Final Preparations Executed to Support OPERATION OVERORD

Chief of Staff Supreme Allied Command (COSSAC) calculated the shipping required to secure a lodgment and facilitate throughput to sustain Allied forces.<sup>112</sup> Commissioner Land worked with the merchant shipping construction planning to support COSSAC. In October 1942, Land proposed to FDR, US Army, and US Navy a reallocation of steel on behalf of the MC. Land and Commissioner Vickory proposed new timelines for ship construction to have enough vessels for future operations.<sup>113</sup> The buildup to mass the appropriate forces occurred from October 1943 through June 1944. Starting in October 1943, between one and two hundred thousand US soldiers shipped from the US to Britain each month until June 1944.<sup>114</sup> The British ports along the southern coastline overflowed.<sup>115</sup>

The shipping volume required a great deal of coordination between US Army port operators and British ports. The British dealt with a shortage of port workers throughout southern England.<sup>116</sup> British labor predominately operated the ports until the summer of 1943. Colonel (later Major General) Frank Ross served as the US Army Chief of Transportation representative in London. The US Army did not appreciate the English custom of tea-time nor of the lack of manpower at the ports. During the summer of 1943, British labor at ports went on strike. The British port unions and the US Army were able to reconcile differences.<sup>117</sup> This reconciliation facilitated the US Army coordinating with the British authorities to assume many of the port requirements and operations.<sup>118</sup> The ships staging in British waters

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<sup>112</sup> COSSAC, OPERATION OVERLORD plan, published 7 July 1943, referenced at [http://cgsc.cdmhost.com/cdm4/item\\_viewer.php?CISOROOT=/p4013coll8&CISOPTR=1246](http://cgsc.cdmhost.com/cdm4/item_viewer.php?CISOROOT=/p4013coll8&CISOPTR=1246). Hereafter referred to as COSSAC plan.

<sup>113</sup> Joel R. Davidson, *The Unsinkable Fleet, The Policies of the US Navy, Expansion in World War II* (Naval Institute Press, Maryland, 1996), 77-8.

<sup>114</sup> Joseph Bykofsky, *The Technical Services The Transportation Corps: Operations Overseas* (Office of the Chief of History, Washington, D.C., 1957), 103.

<sup>115</sup> Ibid, 111.

<sup>116</sup> Ibid.

<sup>117</sup> Ibid.

<sup>118</sup> Ibid, 110.

in preparation required expedient loading and staging to minimize the impact of dedicated OVERLORD shipping to worldwide commitments.<sup>119</sup>

The volume of shipping available following the summer of 1943 made the operation possible.<sup>120</sup> Abundant shipping allowed some older merchant ships to create sheltered barriers at the landing sites by intentional scuttling.<sup>121</sup> The breakwater aimed to protect against adverse weather.<sup>122</sup> Planners intended to capture Cherbourg within two weeks to assist in the throughput of the forces and equipment.<sup>123</sup> The shipping management and flow of personnel and equipment became difficult when ports at Cherbourg and others along the Brittany coasts were not captured as planned. The failure to capture the port facilities stressed the beachhead port operations and slowed the turnaround time of the limited shipping available.<sup>124</sup>

The Supreme Headquarters Allied Expeditionary Forces (SHAEF) revised the COSSAC plans. Lieutenant General Sir Frederick E. Morgan, a British officer, was the Chief of Staff and oversaw the COSSAC planning team. He became an assistant Chief of Staff for the SHAEF staff in December 1943 and provided continuity for the planning effort. General Dwight D. Eisenhower, the SHAEF commander, moved his headquarters to London in February 1944 due to shortfalls in coordinating through cables. The COSSAC planners produced a conceptual plan with an operational approach without developing it into a

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<sup>119</sup> Ibid, 121.

<sup>120</sup> Larson, 165-167.

<sup>121</sup> COSSAC plan, 4. The list of ships deliberately sunk to create the barrier can be referenced at United States Merchant Marine, <http://www.usmm.org/>, accessed 20 September 2010. This is in addition to the more well known Mulberry harbors.

<sup>122</sup> Ibid, 4.

<sup>123</sup> Ibid, 5.

<sup>124</sup> Harrison, 426.

completely detailed plan. The SHAEF produced a detailed plan based off the COSSAC plan.<sup>125</sup> The WSA supplied the shipping requirements requested by the Allies to conduct the assault.<sup>126</sup>

## OPERATION OVERLORD

The planning in COSSAC in early 1942 indicates the level of farsightedness of planners involved in shipping management and production. The SHAEF in 1943 and 1944 further refined the shipping requirements. Allied planners articulated the required infrastructure to sustain shipping for the Allied order of battle.<sup>127</sup> Staging of key equipment, such as tugs, docks, cranes and bailey bridges proved critical for required throughput of forces and equipment.<sup>128</sup> The initial landings and lodgments provided secure locations to erect the shipping support facilities on the beachheads. Tugs towed barges across the channel. Breakwaters of scuttled Liberty ships protected the pontoon bridges. Material handling equipment unloaded cargo along the prefabricated docking system the Allies assembled on the beaches.<sup>129</sup> The high priority allocated to shipping requirements and management indicated the importance of shipping.

The Germans did not significantly threaten the landing ships and merchant shipping during the invasion. Numerous factors contributed to this situation. The production of aircraft used in anti-submarine warfare also produced bombers supporting the combined bomber campaign against Germany.<sup>130</sup> The combined efforts of the British and American bombers took their toll on Germany's Air Force. The COSSAC planning process incorporated the requirement to have fighter squadrons transferred to

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<sup>125</sup> Ronald G. Ruppenthal, *US Army in World War II, European Theater of Operations, Logistical Support to the Armies Volume I: May 1941 – September 1944* (Office of the Chief of History, Washington, D.C., 1953), 269.

<sup>126</sup> Harrison, 169-171.

<sup>127</sup> COSSAC plan, 3-6.

<sup>128</sup> Bykofsky, 138.

<sup>129</sup> Ibid, 293-4.

<sup>130</sup> Harrison, 86.

Northern France to provide local air superiority.<sup>131</sup> The Allies effectively established air superiority over Europe and command of the sea through anti-submarine and air power efforts.<sup>132</sup>

The sheer scale of shipping and amphibious innovations to facilitate landing operations surprised the Germans.<sup>133</sup> The ability to land ten divisions of soldiers over five beaches seemed possible. The Allies' ability to sustain forces ashore from cargo shipping without an established port completely undid German calculations in their response.<sup>134</sup> The prefabricated ports constructed in Britain and towed across the channel provided the necessary port facilities on the beaches. The port facilities supported the logistical needs of forces ashore and brought 2.8 million personnel and 11.4 million long tons ashore between June 1944 and May 1945 (See APPENDIX 1 – Cargo and Personnel Downloaded in Northern France).<sup>135</sup>

Theater command retained shipping management for several months to support the ferrying of supplies from depots in England to northern France. Most vessels traversed the channel three or more times.<sup>136</sup> Merchant shipping dropped cargo and personnel and immediately returned to ports along the southern coast of Britain. The throughput for the invasion plan required three to five divisions of monthly throughput of forces and sustainment for them once the initial eighteen divisions landed ashore.<sup>137</sup> US

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<sup>131</sup> COSSAC plan, 7.

<sup>132</sup> Karl Doenitz, Grand Admiral (German), translated by G.H. Bennett and R. Bennett, *Hitler's Admirals* (Naval Institute Press, Maryland, 2004), p199.

<sup>133</sup> Otto Schulz, Rear Admiral (German), translated by G.H. Bennett and R. Bennett, *Hitler's Admirals* (Naval Institute Press, Maryland, 2004), p197.

<sup>134</sup> Karl R. Gerd von Rundstedt, Office of Naval Intelligence, The O.N.I. Weekly. 3, no.46 (15 Nov. 1944): 3692-3699. Accessed at <http://www.history.navy.mil/faqs/faq109-5.htm>, 7 October 2010.

<sup>135</sup> Bykofsky, 312. A long ton is 2,240lbs or 20 hundredweight (cwt).

<sup>136</sup> Ibid, 310.

<sup>137</sup> COSSAC plan, 6.

Army logicians computed required resources to support by timeline and planned for means to provide on the shore.<sup>138</sup>

## Conclusion

Shipping management by the WSA, US Army and MC in the support of OPERATION OVERLORD demonstrated the criticality of shipping to the success of the European War. Military and political leaders collaborated to establish a feasible timeline for the invasion. The MC supported the shipbuilding requirements, especially in construction of assault vessels such as LSTs. The WSA allocated shipping in accordance with the military planners' logistical requirements. From the tensions during the first months of the war, the relationship improved immensely to produce the overwhelming success of the shipping effort that supported the invasion of Normandy.

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<sup>138</sup> Outline of Operation Overlord, <http://www.history.army.mil/documents/WWII/g4-OL/g4-ol.htm>, an excerpt from Historical Manuscripts Collection (HMC) under file number 8-3.4 AA v.7, accessed 18 September 2010.

## Chapter 5 – Conclusion

The United States Army prepared to enter a possible world war as early as the 1930s.<sup>139</sup> The US President assisted the buildup of economic and structural strength to prepare the US. Agencies, economic support to Allies and military planning occurred in preparation for the eventual entrance of the US into WWII on the side of the Allies.<sup>140</sup> US legislators assisted at key times to support the increase in readiness of the US to conduct war worldwide. Upon entry into WWII, the US dealt with difficulties and shortfalls in merchant shipping required to project forces abroad. By 1944, the shipping problems disappeared. The bridge made of the steel decks of merchant shipping across the Atlantic and Pacific Oceans proved a critical role in the Allied victory in WWII.

The Allies received aid from the US prior the US joining WWII via the Lend-Lease program. As part of Lend-Lease, FDR obtained the bases for destroyers deal with Britain to assist in convoy security in the Battle of the Atlantic. The US provided a measure of security of shipping in the West Atlantic to assist the British. When currency for the British pound fell to unacceptable levels for the US, the US passed the formal Lend-Lease legislation [in what year?]. This provided the engine to drive additional aid to Allied countries such as Britain and the Soviet Union. The MC worked with the British to construct additional cargo vessels that the British required to maintain their sea lines of communication in the Atlantic. This aid to the Allies started in the 1930s and continued throughout WWII. Foreseeing the need for more merchant shipping (as forecast by interwar planners in both the Army and the Navy), FDR directed the MC to begin significant construction of merchant shipping for use by the US military and civilian sectors.<sup>141</sup>

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<sup>139</sup> Ross, *Plans for War Against the British Empire and Japan, The Red, Orange and Red-Orange Plan 1923-1938*. These plans became consolidated plans, the Rainbow Plans.

<sup>140</sup> Alan Gropman, *The Big 'L': American Logistics in World War II* (National Defense University Press, Washington, DC, 1997). Chapter 1 has multiple subsections addressing legislation, mobilization planning and the US industry rapid momentum gain.

<sup>141</sup> For example, see NARA, Chief of Naval Operations Correspondence, RG80 (microfilm) APPENDIX F WPL-9 Mobile Base Project, 20 December 1923. WPL-9 is the 1923 Navy version of War Plan Orange. ADD THIS TO YOUR BIBLIOGRAPHY IN THE PRIMARY SOURCE SECTION.

In conjunction with the economic aid provided to the Allies prior to the US entrance into WWII, the US military planners anticipated future wars and planned accordingly. The Army Planning Division conducted annual planning exercises at the Army War College in Washington, DC. These plans were color coded to distinguish potential adversaries in the future. In particular, War Plan Orange against the Japanese provided significant planning requirements for merchant shipping support. These planning figures would become useful once war abruptly came on the US on 7 December 1941.

US legislators assisted in preparation prior to the commencement of official hostilities with more than just economic aid to Allies. The Merchant Marine Act of 1936 provided the Roosevelt Administration with the authority to create a civilian agency for construction, training and management of all merchant shipping. The MC provided expertise and skillful management of a very limited resource for the US – merchant shipping.

Pearl Harbor brought WWII to the US. Merchant shipping fell woefully short of the requirements required of it in the first eighteen months of the war. The requirements on the MC called for extended capabilities. Accordingly, the President created the WSA to manage available shipping while the MC continued vessel construction. US military planners and leaders intended to bring the fight to the European continent as early as 1942. The US military demonstrated frustration with the WSA when shipping was unavailable to support operations as delineated in the military planners' desired timeline. By 1943, the construction efforts of the MC provided enough merchant shipping to support an assault on the North African coast while simultaneously maintaining the Lend-Lease supplies to Britain and the Soviet Union.

By the end of 1943, the MC had remedied the shipping shortage situation. OPERATION OVERLORD demonstrated how effectively and responsively the MC met the emergent shipping construction requirements. The WSA provided enough shipping for the buildup and conduct of the invasion of Normandy while supporting the two pronged island hopping campaign in the Pacific. Enough shipping provided support to allow the MC to start cancelling construction contracts. The farsighted planning of military officers was responsible for identifying construction requirements and shipping support infrastructure improvements that enabled success in the heat of global war.

Such a stupendous accomplishment requires a review of the elements for success. The first question is what planning, management and coordination of shipping requirements existed within the US Army and civilian agencies prior to and during World War II? The MC presided as civilian agency over merchant vessel construction and management. The US Army managed its own fleet of vessels prior to US entry into WWII to maintain its post worldwide. The US government civilians and Army personnel both worked relatively independent of each other prior to WWI. That quickly changed after 7 December 1941.

The second question is did operations occur in spite of, or in coordination with, merchant shipping? As indicated above, the situation was precarious during the first eighteen months. The WSA and US Army differed on such issues as vessel loading and port operations. Some of the disputes required the President to mediate.<sup>142</sup> OPERATION TORCH is an example of positive coordination conducted to provide the correct vessels for amphibious operations. LSTs built by the MC facilitated the operation, even if the MC's initial planning did not accommodate LST construction. The MC provided ways to build LSTs for the US Army instead of increasing merchant vessel construction when the opportunity presented itself in 1942.<sup>143</sup> OPERATION OVERLORD is an example of how thinking about the requirements to produce the required throughput of personnel and equipment without a port can allow ingenuity such as barriers, mobile port facilities and equipment.

The most important question concerns the effectiveness of merchant shipping management and coordination to support the war effort, or simply did they work? No doubt exists about the overall effectiveness of the US to produce military material, Navy warships or merchant shipping during WWII. At no other time in US history has so much tonnage been produced within a comparable timeline. Prior to the US entry into WWII, the relationship between the MC and US Army constrained management at the war's onset. The first eighteen months experienced limitations due to merchant shipping. No such

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<sup>142</sup> Leighton, 618.

<sup>143</sup> Lane, .

limitations existed past fall of 1943. Merchant shipping in WWII management by the Allies in WWII, specifically inside the US government, worked.

## **Follow-up Research Questions**

The focus of effort in this essay did not answer a number of questions that arise from the study of merchant shipping in WWII. Once the shipping allocation was determined at the Office of the Chief of Transportation (OCT), and planned with the WSA, how were the theater commanders able to execute? The WSA and OCT placed a hard restraint or limitation on the theater commanders on how they echelon their amphibious operations throughout the world. How much dialog was transpiring with theater commanders and the US Army planners concerning the limits placed on them? Understandably, theater commanders wanted more and faster, but how was the theater staff able to work within the limits placed on them by the US Army staff?

The study of WWII merchant shipping management can lead to research about how plans for execution by 2010 United States Transportation Command (USTRANSCOM) in the event of a large scale war. For example, can the joint headquarters of USTRANSCOM provide the necessary staffing, planning and management of current resources if the demand increases to support world war type numbers (in the millions) abroad? Can USTRANSCOM be effective today to the same level found in WWII? What are the current working relationships with USTRANSCOM with the current merchant shipping managers of the Maritime Agency?

## **Final Thoughts**

The US built a bridge of steel in the form of merchant shipping across the Atlantic and Pacific Oceans during WWII to defeat the Japanese, Italians and Germans. The US had military planners thinking about the use of merchant shipping prior to 1941. The civilian leadership of the US actively engaged in building capabilities for merchant vessel construction prior to WWII. The US Army managed a small fleet prior to 1941. Despite this limited experience with a small fleet, in no small part due to effective

planning and reorganization, they managed to prevail. Although merchant shipping limited operations in the first eighteen months, it provided enough support to the two-prong attack in the Pacific, Operation TORCH in the European theater, and for substantial Lend-Lease requirements to keep US Allies in the fight. The final year of WWII experienced merchant shipping supporting operations worldwide without significant impediment. OPERATION OVERLORD (and later OPERATION ICEBERG at Okinawa) demonstrated the farsighted planners providing guidance to construction requirements, the MC programming construction to support the US Army and the WSA providing adequate shipping to conduct the operation. The US Army, MC, and WSA built the steel bridge of shipping to assure Allied victory in WWII.

## **APPENDIX 1 – Cargo and Personnel Downloaded in Northern France<sup>144</sup>**

	Cargo Discharged (long tons)	Personnel Debarked
Cherbourg	2,967,341	95,923
Antwerp	2,658,000	33
Omaha Beach	1,264,999	801,000
Le Harve	1,168,171	1,014,036
Rouen	1,164,511	82,199
Utah Beach	726,014	801,005
Ghent	614,861	6
Brittany	253,837	1,378
Minor Normandy	600,884	788
<b>Total:</b>	<b><u>11,418,618</u></b>	<b><u>2,796,368</u></b>

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<sup>144</sup> Bykofski, 312.

## APPENDIX 2 – The War Shipping Administration Order<sup>145</sup>

1. There is established within the Office for Emergency Management of the Executive Office of the President a War Shipping Administration under the direction of an Administrator who shall be appointed by and responsible to the President.
2. The Administrator shall perform the following functions and duties:
  - (a) Control the operation, purchase, charter, requisition, and use of all ocean vessels under the flag or control of the United States, except
    - (1) combatant vessels of the Army, Navy, and Coast Guard; fleet auxiliaries of the Navy; and transports owned by the Army and Navy; and
    - (2) vessels engaged in coastwise, intercoastal, and inland transportation under the control of the Director of the Office of Defense Transportation.
  - (b) Allocate vessels under the flag or control of the United States for use by the Army, Navy, other Federal departments and agencies, and the Governments of the United Nations.
  - (c) Provide marine insurance and reinsurance against loss or damage by the risks of war as authorized by Title II of the Merchant Marine Act, 1936, as amended.
  - (d) Establish the conditions to be complied with as a condition to receiving priorities and other advantages as provided in Public Law 173, 77th Congress, approved July 14, 1941.
  - (e) Represent the United States Government in dealing with the British Ministry of War Transport and with similar shipping agencies of Nations allied with the United States in the prosecution of the war, in matters related to the use of shipping.
  - (f) Maintain current data on the availability of shipping in being and under construction and furnish such data on request to the Departments of War and the Navy, and other Federal departments and agencies concerned with the import or export of war materials and commodities.

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<sup>145</sup> Wardlow, *Monograph #10*, 32.

(g) Keep the President informed with regard to the progress made in carrying out this Order and perform such related duties as the President shall from time to time assign or delegate to him.

3. The functions, duties, and powers conferred by law upon the United States Maritime Commission with respect to the operation, purchase, charter, insurance, repair, maintenance, and requisition of vessels, and the issuance of warrants with respect thereto, under the Merchant Marine Act of 1936 as amended, 49 Stat. 1985, Public Law No. 101, 77th Congress, approved June 6, 1941, and Executive Order No. 8771 issued pursuant thereto, Public Law No. 173, 77th Congress, approved July 14, 1941, are hereby transferred to the Administrator; and such part of existing personnel of the United States Maritime Commission together with such records and public property as the Administrator may deem necessary to the full exercise of his functions and duties prescribed by this Order are hereby assigned to the War Shipping Administration.

## APPENDIX 3 – US War Department and WSA<sup>146</sup>

### MEMORANDUM COVERING THE INTER-DEPARTMENTAL RELATIONSHIP BETWEEN THE ARMY AND THE WAR SHIPPING ADMINISTRATION TO FORM A BASIS FOR FULL AND COMPLETE COOPERATION IN CONNECTION WITH THE PURCHASE, CHARTER, USE AND OPERATION OF VESSELS AND TERMINAL FACILITIES

(1) The Army Transport Service shall operate its owned tonnage, keeping War Shipping Administration fully and promptly informed of the intended employment of that tonnage so that it may "be reckoned in and synchronized with the overall program, thereby avoiding duplicating waste of ship space.

(2) All troop-carrying vessels for Army use shall "be assigned "by War Shipping Administration to Army and their operation shall "be handled "by the Army' through the existing operating organization, or otherwise as may be agreed upon, "but in conformity with the terms of existing charters and other agreements.

(3) All freighters assigned to the Army shall be loaded by the Army Transport Service.

(4) Subject to such minor adjustments and modifications as may be mutually agreed upon with the War Shipping Administration, all commercial piers and terminals now occupied by the Army shall remain with the Army for its use and such additional piers and terminals as may from time to time become necessary to carry out the strategic movements of the Army shall in the future similarly be placed under the control of the Army, provided, however, that such disposition does not unduly interfere with the moving, loading, unloading and storage of other essential cargo. Whenever these piers and terminals are not necessary for Army use they may be used for other than Army purposes by the War Shipping Administration. Similarly pier and terminals under the control of the War Shipping Administration will be made available for Army use whenever they are not required for the purposes of the War Shipping Administration.

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<sup>146</sup> Wardlow, *Monograph #10*, 37-39.

(5) a) Except in cases of emergency, War Shipping Administration shall be the sole contracting arm of the Army with respect to the purchase, charter or requisitioning of ocean-going vessels.

b) War Shipping Administration and the Army agree to consult and advise with one another as to the purposes and terms of occupancy, financial consideration, rates and other terms and conditions before requisitioning, renting or purchasing piers and terminals.

(6) Both in Washington and at ports of embarkation the closest possible liaison shall be maintained between Army Transport and War Shipping Administration so that cargo can be interchanged by mutual consent between vessels to secure close stowage and full and down loadings.

(7) Beyond the capacity of its terminal facilities, the Army should utilize existing stevedoring organizations and terminals under Army supervision arrangements for such services to be in conformity with the rates of compensation and standard contract provisions of the War Shipping Administration.

(8) Outside cargo shipped on Army vessels shall, if possible, be confined to large blocks of other governmental and Lend-Lease cargoes which can be handled without involving questions of unexpected diversion to meet military exigencies and undue complications in billing, freight collections, damage claims, etc.

(9) Assignments (other than troopship assignments) "by War Shipping Administration to Army Transport shall "be on a voyage to voyage basis only, but made as far in advance as is practicable, thus to effect the greatest flexibility and therefore the greatest effectiveness in the use of the pools of shipping under American control and the control of the United Nations.

(10) All assigned vessels except troopships should revert to War Shipping Administration upon completion of discharge of Army cargo and their homeward employment should be determined and controlled by War Shipping Administration. The theater commander, Army or Navy, may in emergencies temporarily retain such vessels as the military necessity demands. In such cases the War Shipping Administration will be promptly advised.

(11) Subject to the requirements of the Army troop movement schedule whenever practical homeward employment of troop ships will be determined by War Shipping Administration.

(12) With the same restriction and subject to priority for Army return cargo, the Army Transport shall place its own vessels at disposal of War Shipping Administration for carrying homeward cargo.

(13) Where the Army takes over commercial terminal facilities, it shall whenever practicable, agree to use existing experienced contracting stevedores on a remuneration not exceeding that paid by War Shipping Administration for similar services.

(14) Whenever practicable the Army shall take over the personnel operating those terminals, provided that such personnel will enter Army service or employment on proper terms.

(15) Subject to necessary precautions for secrecy, the Army and War Shipping Administration shall exchange Information as to loadings, movements, etc., so that each agency will have the Information essential for planning an efficient operation.

(16) The conversion and alteration of ships to fit them for troop carrying or other special conditions necessary for utilization by the Army, and including arming and degaussing, should be accomplished either by the War Shipping Administration or the Army, or the two agencies Jointly, in a manner that will best meet the requirements. Normally, work on vessels under bare-boat charter to the Army should be accomplished by the Army. Similarly, work on vessels under charter to the War Shipping Administration and allocated for Army use should be accomplished by the War Shipping Administration. Mutual assistance and cooperation in carrying out work is enjoined to the end that the necessary work will be completed in the most expeditious and economical manner.

(17) The Army and War Shipping Administration will cooperate in arranging suitable modifications or amendments in the appropriations for each agency BO that the provisions of such appropriations will conform with this understanding.

(18) The War Shipping Administration has no Intention or ambition to absorb the functions of the Army Transport Service, either by use of Its requisition powers or otherwise. Similarly, the Army

Transport Service has no intention or ambition to achieve the complete control and operation of vessels by use of its requisition powers or otherwise, excepting always those owned by it or permanently assigned to it. Both the Army and War Shipping Administration agree that in connection with the requisition, rental or purchase of terminals each shall refrain from taking any action which would jeopardize the operations or requirements of the other agency.

Approved:

(signed) Brehon Somervell

Lt. General Brehon Somervell

(signed) L. W. Douglas

L. W. Douglas, Deputy Administrator War Shipping Administration

(Approved, June 13, 1942)

## APPENDIX 4 – OPERATION TORCH Planning Numbers

Tentative convoy schedule for Western Task Force: 17 September 1942		
Day	<i>Composition of Convoy</i>	<i>Convoy</i>
D Day	13,000 Combat-loaded troops (12 APA's, 10 XAPA's, 6 AKA's, 1 seatrain)	UGF-1
D Plus 5	32,000 Combat-loaded troops (10 troop ships, 10 fast cargo ships)	UGF-2
D Plus 20	Slow cargo convoy carrying remainder of equipment for 24,000 troops and 60 days of supply for 55,000 troops (25 cargo vessels)	UGS-2
D Plus 40	Fast convoy, 30,000 troops, convoy-loaded (16 or 17 troop ships)	UGF-3
D Plus 45	Slow cargo convoy, carrying equipment for 30,000 troops and 30 days of supply for 55,000 troops (32 cargo vessels)	UGS-3
D Plus 65	Fast convoy (34,000 troops, 19 troop ships)	UGF-4
D Plus 70	Slow cargo convoy, carrying equipment for 34,000 troops and 30 days of supply for 85,000 troops (39 cargo vessels)	UGS-4
D Plus 90	Fast convoy (36,000 troops, 10 troop ships)	UGF-5
D Plus 95	Slow cargo convoy, carrying equipment for 36,000 troops and 30 days of supply for 119,000 troops (44 cargo vessels)	UGS-5
Source: Schedule attached to memo, Margruder for Lutes, 17 Sep 42, sub: Mtg Concerning Trans for Certain Ops, 18 Shipg file, I, Case 12, Plng Div ASF		

## **APPENDIX 5 – Pacific Theater CDR Theater Managing Logistics and Transportation<sup>147</sup>**

(1) The following, which applied to all U. S. Army forces, were retained by the U. S. Army Services of Supply (USASOS), successor of USAFIA, when USAOT was established; recreational, religious, and welfare activities, operation of a graves registration and burial service, reclassification of officers of the services of supply, insuring the evacuation of all sick and wounded, coordinating all requests for air transportation, obtaining such transportation, and doing all construction - all under the supervision of USAFFE.

(2) Two functions retained by USASOS did not apply at any time to Air Corps technical supply: receipt of requisitions for supplies, and submission of such requisitions to the Australian Government or to Services of Supply, Washington.

(3) The operation of all replacement centers was a function of USAFIA and TTSASOS, but replacement of Air Corps forces was removed from control of USASOS on 26 February 1943.

(4) Various functions originally performed for all troops by TJSafia and USASOS were in part transferred to the internal administration of combat commands and task forces on 26 February 1943. These functions included the reception and quartering of troops, the requisitioning of necessary replacements for troops (other than Air Corps), the assignment of casualties and replacements (other than Air Corps), the payment of troops, the collection and return of stragglers, the administration of military justice, the transfer of personnel, the hospitalization of troops, the operation of "all of the United States Army water transportation facilities<sup>11</sup> at the disposal of StfPA, and the operation of U. S. Army port facilities.

(5) Two functions were transferred in to USAFFE: operation of a Central Records Office and operation of the postal services.

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<sup>147</sup> Masterson, 23-24.

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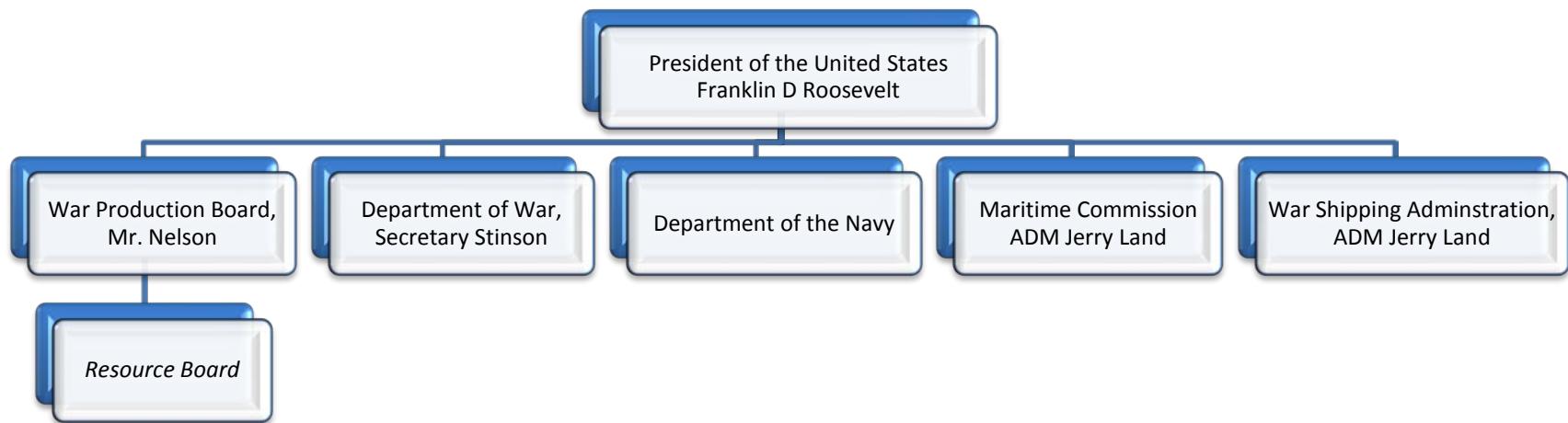
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**Figure 2 -- Merchant Shipping Managers Command Relations**

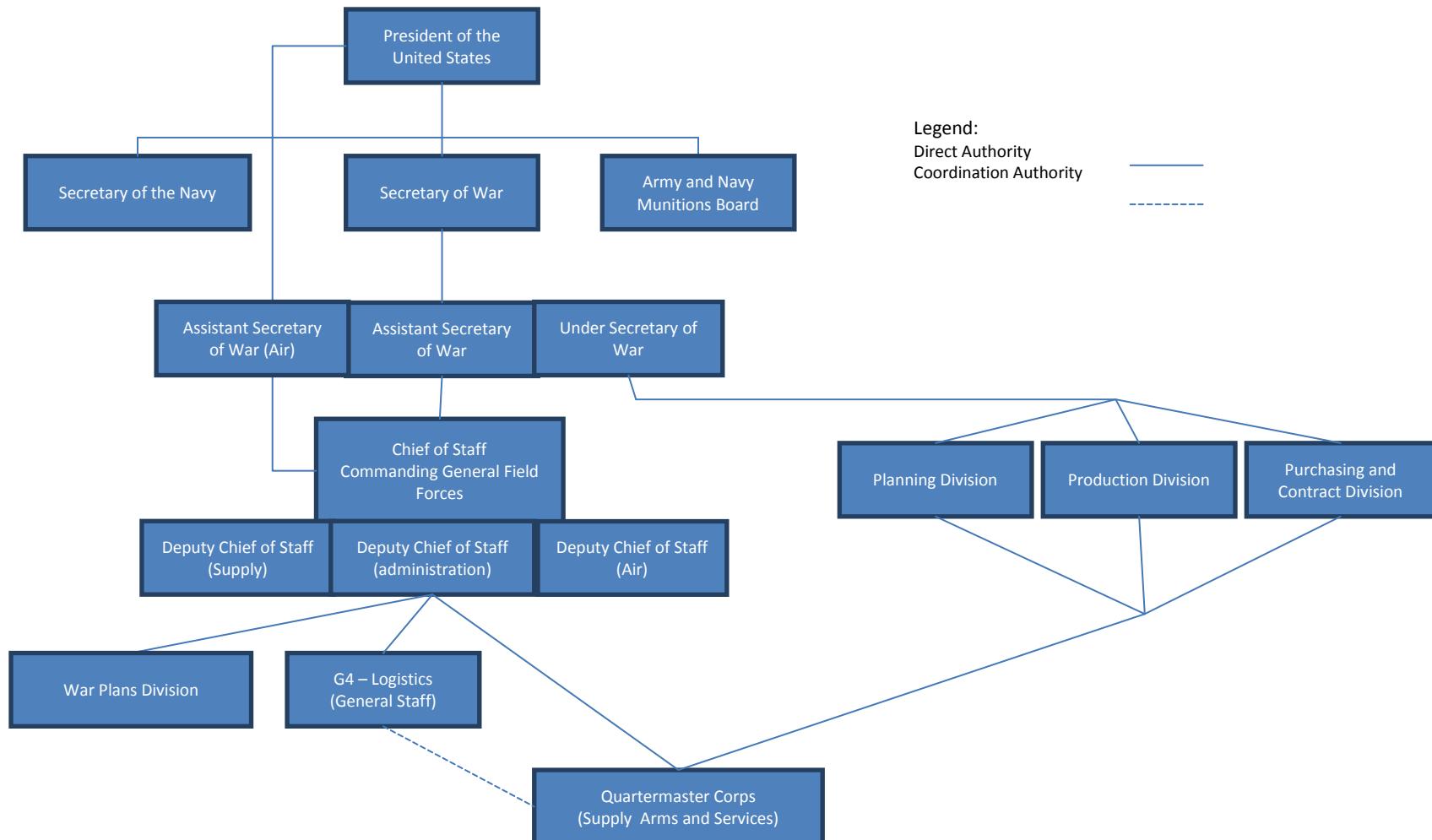


Figure 3 — The Army in December 1941. Source: Global Logistics and Strategy 1940-1943, p220

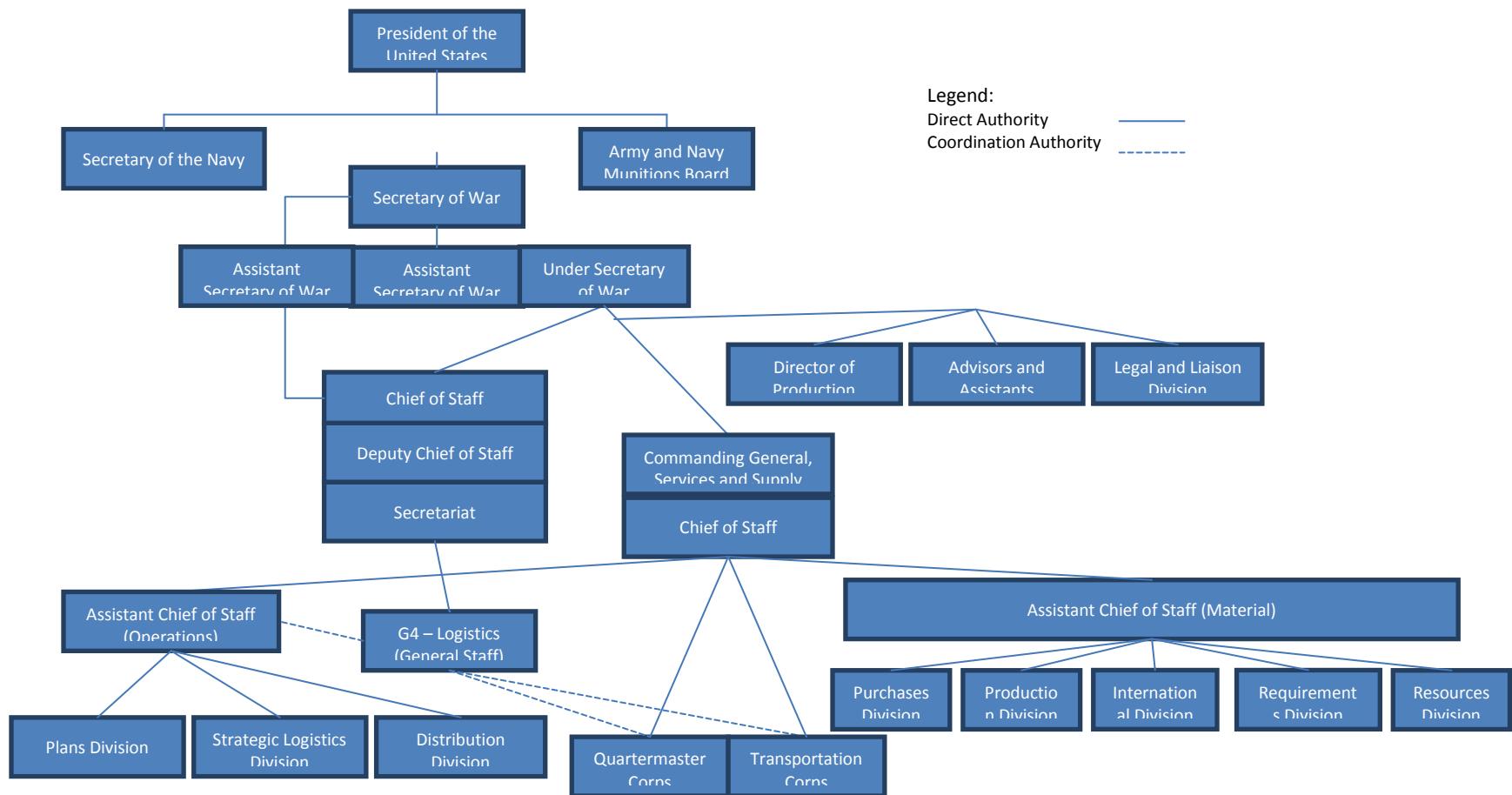


Figure 4 -- Army Organization September 1942. Source: Global Logistics and Strategy: 1940-1943, p224